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MACKENZIE VALLEY PIPELINE INQUIRY

Government
Publications

IN THE MATTER OF APPLICATIONS BY EACH OF

- (a) CANADIAN ARCTIC GAS PIPELINE LIMITED FOR A
RIGHT-OF-WAY THAT MIGHT BE GRANTED ACROSS
CROWN LANDS WITHIN THE YUKON TERRITORY AND
THE NORTHWEST TERRITORIES, and
- (b) FOOTHILLS PIPE LINES LTD. FOR A RIGHT-OF-WAY
THAT MIGHT BE GRANTED ACROSS CROWN LANDS
WITHIN THE NORTHWEST TERRITORIES

FOR THE PURPOSE OF A PROPOSED MACKENZIE VALLEY PIPELINE

and

IN THE MATTER OF THE SOCIAL, ENVIRONMENTAL AND
ECONOMIC IMPACT REGIONALLY OF THE CONSTRUCTION,
OPERATION AND SUBSEQUENT ABANDONMENT OF THE ABOVE
PROPOSED PIPELINE

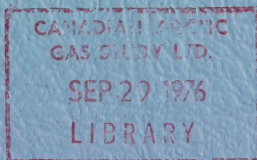
(Before the Honourable Mr. Justice Berger, Commissioner)

Yellowknife, N.W.T.

September 24, 1976.

PROCEEDINGS AT INQUIRY

Volume 191



APPEARANCES:

Mr. Ian G. Scott, Q.C.,
Mr. Stephen T. Goudge,
Mr. Alick Ryder, and
Mr. Ian Roland, for Mackenzie Valley Pipeline Inquiry;

Mr. Pierre Genest, Q.C.,
Mr. Jack Marshall,
Mr. Darryl Carter,
Mr. J.T. Steeves, and for Canadian Arctic Gas Pipeline Limited;
Mr. Gerry Ziskrout,

Mr. Reginald Gibbs, Q.C.,
Mr. Alan Hollingworth,
Mr. John W. Lutes, and for Foothills Pipe Lines Ltd.;
Mr. Ian MacLachlan,
Mr. Russell Anthony,
Prof. Alastair Lucas and
Mr. Garth Evans, for Canadian Arctic Resources Committee;

Mr. Glen W. Bell and
Mr. Gerry Sutton, for Northwest Territories Indian Brotherhood, and Metis Association of the Northwest Territories;

Mr. John Bayly and
Miss Lesley Lane, for Inuit Tapirisat of Canada, and The Committee for Original Peoples Entitlement;

Mr. Ron Veale and
Mr. Allen Lueck, for The Council for the Yukon Indians;

Mr. Carson Templeton, for Environment Protection Board;

Mr. David H. Searle, Q.C. for Northwest Territories Chamber of Commerce;

Mr. Murray Sigler and for The Association of Municipalities;
Mr. David Reesor,

Mr. John Ballem, Q.C., for Producer Companies (Imperial, Shell & Gulf);

Mrs. Joanne MacQuarrie, for Mental Health Association of the Northwest Territories.

CANADIAN ARCTIC
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Yellowknife, N.W.T.

September 24, 1976.

(PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT)

MR. SCOTT: Mr. Commissioner,
could I begin by making three announcements?

First, I'd like to introduce Mr. Gord Erion, who is here on behalf of the Chambers of Commerce and I understand that if he wants to cross-examine witnesses, there will be no difficulty in seeing that that's permitted.

The second thing is it's been necessary to make some changes in the schedule for the week of October 4th, and I thought it would be helpful to counsel if I simply announced what evidence would be heard that week.

On Monday, October 4th, we will hear from the COPE land claims panel. We will hear two panels called by Commission counsel, one is on native languages and development; the second is a panel composed of Professor Michael Baring-Gould, and Marsha Bennett on development impacts in Valdez; and the third is Mr. Butters, who is called by Mr. Sigler and who was supposed to have given evidence yesterday but was unable to do so. I haven't yet been able to circulate the evidence of Professor Michael Baring-Gould on impacts in Valdez, but I hope that that will be circulated today or on Monday.

On Tuesday, October 5th, Mr. Templeton will give evidence on the subject of implementation.

On Wednesday, October 6th, we will call Mr. Bergasse , whose evidence was tendered yesterday; and Mr. Hemstock of Arctic Gas will give evidence on the contingency plan and the corridor concept.

On Thursday, October 7th, Mr. Notti will return to be examined; and the Beaufort-delta oil consortium will give evidence with respect to an oil pipeline, which will be called by Commission counsel; and later in that day Foothills will give evidence with respect to their amendments for 50 miles of construction.

On Friday, October 8th, both Foothills and Arctic Gas will be calling evidence on northern construction problems. That will be the evidence for October 4th.

I thought, sir, I should also announce the further program of the Inquiry which, subject to your ruling, has been approved by all counsel appearing.

We anticipate that the evidence will be completed on Friday, October 15th. Based on that completion date, Commission counsel will make available to all participants and to the secretary of the Inquiry his proposed terms and recommendations which he will submit to you in argument. Those will be available to all participants on Monday, October 18th.

There will then be three weeks in which participants will have an opportunity

1 to review Commission counsel's recommendations and
2 to prepare their own. At the end of the third week
3 each participant who wishes to make oral submissions
4 will file with each of the other participants a
5 summary of the terms and recommendations that he
6 proposes to advance before you in oral argument.

7 There will be then one week
8 when all counsel and participants will have an
9 opportunity to review those summaries of terms and
10 recommendations, and oral submissions will begin in
11 Yellowknife on November 15th.

12 As I say, that method of
13 proceeding has been agreed upon by all counsel, and
14 I'm grateful to them for their co-operation and
15 assistance, and unless you have any objections, sir,
16 that's the way we would propose to proceed.

17 THE COMMISSIONER: That's
18 fine. I found on my table here this morning three
19 rings, one of them a turquoise -- with a turquoise
20 stone. If anyone turns up during the day looking for
21 them, I'll give them to Miss Carriere and you can
22 leave them at the desk of the hotel.

23 MR. SCOTT: Well, Mr. Commis-
24 sioner, the evidence to be called by Commission counsel
25 this morning relates to Mackenzie River Valley trans-
26 portation systems -- rail, water, air, etc. -- and
27 we have already filed as Exhibit No. 778 an elaborate
28 brief that the panel you see before you has prepared,
29 which is fundamentally a survey of those systems and
30 analysis of their capacity, and some statements about

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1 the impact that the proposals contained in the two
2 applications may have for those systems. We don't
3 propose to read in that evidence. It's now been
4 available to counsel for some weeks. Instead, I have
5 asked the panel to prepare a summary of significant
6 points that they wish to make with respect to the
7 existing transportation resources in the Mackenzie
8 Valley, and they propose to do that. I should
9 introduce the panel to you, and I'll do so by asking
10 each of them to provide their curriculum vitae.

11 MEL G. HAGGLUND,

12 JULIAN HAWRYSZKO,

13 EDOUARD PREFONTAINE,

14 MRS. LUCILLE LEBLANC,

15 DEREK E. EVANS, sworn:

16 DIRECT EXAMINATION BY MR. SCOTT:

17 Q On your left, sir, is
18 M.G. Hagglund, the administrator of transport,
19 Canada's Transportation Agency. Mr. Hagglund, I
20 understand that you're a graduate of both the Univer-
21 sity of British Columbia and the University of Toronto.

22 WITNESS HAGGLUND: That's
23 right.

24 Q And you joined Transport
25 Canada in 1949 as a meteorologist and that in your
26 tour of duty as a meteorologist you served in Canada's
27 Arctic.

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A That's right.

Q You left the meteorological service in 1964 and commenced a new career in management and administration in Transport Canada serving as Chief of Airports Planning and Research and as Regional Administrator of the Air Administration Central Region in Winnipeg, Manitoba?

A Right.

Q And that in October of 1972 you were appointed administrator of the Arctic Transportation Agency?

A That's correct.

Q Next sir is Julian Hawryszko. I understand that you're a graduate in geology with a Bachelors Degree and a Master of Arts from Queens University?

WITNESS HAWRYSZKO: The Bachelors is from Queens. The Masters if from the University of Kansas.

Q All right. And that you've been employed as a geologist in the oil industry for a number of years?

A Yes, sir.

Q And you joined the Department of Indian Affairs and Northern Development in 1968 where you have laterally been involved in studies related to resource and transportation economics?

A Yes, sir.

Q And you are now Policy

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Advisor in the Arctic Transportation Agency of the
Department of Transport?

A Yes, sir.

Q Next, Mr. Commissioner,
is Edouard Prefontaine. Mr. Prefontaine, I understand
that you're a transportation analyst in the Northern
Program Planning Division of the Department of
Indian Affairs and Northern Development?

WITNESS PREFONTAINE: Yes.

Q You hold an Honours
B. A. in economic geography from the University
Quebec in Montreal and an M. A. in transportation
geography from the University of Ottawa?

A That's right.

Q Prior to accepting your
present position last year, you worked at the
Canadian International Development Agency as an
assistant planner and at the University of Ottawa
as a research assistant in regional planning?

A Yes, sir.

Q Next, Mr. Commissioner,
is Mrs. Lucille LeBlanc. Mrs. LeBlanc, I understand
you're the chief inland shipping division, Merchant
Shipping Branch of the Water Transport Committee of
the Canadian Transportation Commission. That's quite
a mouthful.

You're a graduate of the
University of Ottawa? Prior to assuming your present
position, I understand that you were employed with
the former Canadian Maritime Commission where you were

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1 involved in the various aspects of the water transport
2 industry that are subject to Federal Legislation.

3 A That's correct.

4 Q Your primary involvement
5 was with the Transport Act and the issuance of licenses
6 to water transport operators in the Great Lakes and
7 the Mackenzie River System.

8 A Correct.

9 Q And I take it that that
10 process involved the determination of when a certificate
11 of public convenience and necessity existed and should
12 be issued?

13 A That is so.

14 Q Yes. Next and last
15 panelist, Mr. Commissioner, is Derek E. Evans. Mr.
16 Evans, I understand that you're a policy advisor
17 in the Arctic Transportation Agency of the Department
18 of Transport as well?

19 WITNESS EVANS: Yes, I am.

20 Q You hold a B. S. C.
21 degree in electrical engineering from the University
22 of Manitoba and an M. A. in economics from the
23 University of Ottawa?

24 A That's correct.

25 Q And that prior to
26 accepting your present position as a policy advisor,
27 you were with the Telecommunications and Electronics
28 Branch of the Department where you were engaged in the
29 design and construction of electronic aids to navigation.

30 A That's right.

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1 Q Yes. Mr. Commissioner,
I would ask Mr. Hagglund if he'd be good enough to
3 carry on with the panel's presentation.

4 WITNESS HAGGLUND: Thank you,
5 Mr. Commissioner. Actually what we have is a slide
presentation and while Council said that we were going
to brief, I have a suspicion that we may be--still be
a little bit too lengthy.

I'll try and go through it
as quickly as I can. I do have a tendency to speak
11 a little rapidly at times, so if I speak too rapidly,
12 you might slow me down, otherwise I think we can cover
13 it with dispatch.

14 I will be concentrating on
in this summary on the marine mode because it has
16 prime importance to community resupply. It's seasonal
17 limitations, and the relative inflexibility of
18 capacity variation in the shorter term.

19 MR. SCOTT: Now, not too fast,
Mr. Hagglund. We have some time and I've got to
2 understand what you're saying.

22 A All right. Thank you.
The presentation will be divided into four parts;
covering the railways, the roads, air services and
marine services. Each part, in turn, will describe
the routes, the terminals, the operators and the traffic
flow. Finally an assessment of pipeline construction
2 impact on each element will be made.

23 Starting with the railways,
30 there are two rail lines which may be used to transport

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pipeline construction material and equipment into Northern Canada. These are:

- The Great Slave Lake Railway which extends from Roma Junction near Grimshaw, Alberta, we have a chart very shortly; to Hay River and Pine Point in the Northwest Territories.
- The White Pass and Yukon Railway which extends from the seaport of Skagway, Alaska to Whitehorse in the Yukon.

Though physically these railways are vastly different, their operating characteristics are somewhat similar. Primary traffic on both railways is mineral products moving out of Northern Canada, while northbound traffic which is smaller in quantity, consists of consumer and industrial goods. The railways carry all concentrate produced in the Territories but experience competition from other modes for Territories-destined goods.

Starting with the Great Slave Lake Railway. It's operated and maintained by a Crown corporation, Canadian National Railways, as part of its national railway network. Although the railway was also built by CNR, it was financed and is owned by Canadian Government Railways, a paper company, consisting of all those rail lines financed by the Federal Government and operated by Canadian National.

The lead-zinc deposits at Pine Point have been known since the early 1900's. During the 1950's, Cominco, the lessee, proposed to bring the deposit into production and approached the

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Federal Government and the CNR with a request to provide rail connection. Enabling legislation was passed in 1961 and the railway was in full operation by 1965 at a cost of approximately \$75,000,000.00.

Now, the 432 mile Great Slave Lake Railway connects Hay River and Pine Point on the south shore of Great Slave Lake to the Northern Alberta Railway at Roma Junction and thence is the continental rail system.

The Great Slave Lake Railway can be considered to be three segments. The first segment extends 368.8 miles from Roma Junction, Alberta to Pine Junction, Northwest Territories, 8.8 miles south of Hay River.

The second segment extends 8.8 miles from Pine Junction to the terminal at Hay River and the third segment, 54.3 miles from Pine Junction to the terminal at Pine Point.

The Great Slave Lake Railway has three terminals or transshipment points in the Territories. The first one is at Enterprise about 29 miles south of Hay River where there's a siding which serves as a rail truck transfer point for traffic destined for localities on the Mackenzie Highway. This transfer point is of little use at the moment.

At Pine Point the rail terminal has facilities for unloading inbound traffic which is primarily fuel oil and other petroleum products and promoting lead-zinc concentrates into hopper cars and gondola cars.

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And at Hay River the marshalling yard there is 4,900 feet in length. The length of the breakup track is 2,450 feet which is enough to accommodate a maximum of 43 cars. To accommodate the maximum of 70 cars, which is permitted on the line, at least 3,600 feet of breakup track would be required.

This is a picture of a typical ore car used on the railway. The railway accepts shipments in carload lots only, and moves about a million tons per year. Of this one million tons, 80% originated from or is destined for the Northwest Territories; 50% is lead-zinc concentrates from Pine Point; and 25% is destined for Hay River for local consumption or for trans-shipment by barge to communities along the Mackenzie River, or by truck to communities in the southern N.W.T.

Over 75% of the traffic destined for Hay River is petroleum products originating in Edmonton.

The Great Slave Lake Railway does not carry passengers.

Now the Great Slave Lake Railway is a single track line with a good geometric configuration. The maximum gradient is 0.6% and the maximum curvature is 6 degrees. However, the trackage north of Kemp, Alberta, is 85-pound rail, and this relatively light-weight has two effects:

- (1) It's the chief reason for the 30 mile per hour speed limit which results in a total round trip time

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including switching, of about 38 hours.

(2) Unless special permission is received, rail cars must not exceed a gross weight of 110 tons on the line north of Milepost 102, which is just south of Kemp River. South of Milepost 102, the rail weight is 110 pounds and the permissible gross weight is the mainline standard of 113½ tons, although the restricted 30-mile speed limit prevails. The 89-foot flat cars to be used for possible pipeline construction weigh approximately 36 tons when empty.

THE COMMISSIONER: What was that about flat cars again?

A 89-foot flat cars, I'll mention them again later on. They've been recently purchased by C.N.R. for specific types of traffic.

Q We've heard about these flat cars. You said they're 89 feet?

A That's right.

Q To carry pipe.

A That's correct, sir.

They weigh approximately 30 tons when empty. Thus, north of Milepost 102, their cargo capacity is limited to 74 tons compared to 95 tons for standard mainline. An 80-foot section of 48-inch pipe weighs about 14 tons and hence five sections amounting to 69 tons per car could be carried. Similarly, an 80-foot section of 42-inch pipe weighs about 10.5 tons, and seven sections could be carried.

Q So you're saying that

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1
2 you wouldn't have to rebuild the track or the road
3 bed.

4 A No, you'd have to limit
5 the gross weight.

6 Now it's not known what
7 weight increases might be allowed with special con-
8 siderations, Mr. Commissioner.

9 Through trains are scheduled
10 three times a week in each direction between Pine
11 Point and Hay River and Roma Junction. The maximum
12 permissible train length is currently 3,619 feet,
13 which is about 70 cars, but some sidings north of High
14 Level are being extended to 4,400 feet to permit 96
15 car trains. The average train consists of 60 cars
16 pulled by three 1,750-horsepower locomotives. A 1,200-
17 horsepower locomotive is on assignment at Hay River
18 to handle traffic between that station and the junc-
19 tion at Pine Junction.

20 During the barge season, the
21 amount of traffic moving to Hay River increases by
22 a factor of nearly three times, and extra trains are
23 added.

24 Current rail traffic --

25 Q During the what season?

26 A During the barge season.

27 Q Oh, the barge season.

A Yes.

Q Right.

A Current rail traffic in

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the Northwest Territories is about 500,000 tons south-bound and about 270,000 northbound. Pipeline construction and related activities would generate in the order of 600,000 tons of northbound traffic in peak years. This would involve approximately one additional train a day each way, and would seem to be within the capacity of the track although the manual block system used for dispatching trains might have to be augmented. Now the C.N.R. has recently acquired 550 new 89-foot flat cars that will be available for moving pipe, should permits be issued for construction. Pipeline construction-related traffic on the Great Slave Lake Railway would require additional crews and rolling stock from other parts of the C.N. system. Should pipeline construction coincide with a period of expansion in the Canadian economy, difficulties might be encountered in obtaining the additional crews and the rolling stock.

Now turning to the White Pass & Yukon, the White Pass & Yukon Corporation Limited is controlled by Federal Industries Ltd. in Winnipeg.

And a bit of history, construction of the White Pass & Yukon was undertaken to support demands for the Yukon Gold Rush. However, in more recent times the company's operation underwent a major change as a result of development of a large lead-zinc mine in the Yukon by Anvil Mining Corporation. The mine went into production in 1969, and in order to fulfill its contract to move 30,000 tons of mineral /concentrate

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per month from the mine to tidewater at Skagway, White Pass & Yukon Corporation further expanded and upgraded its operations. At a cost of 22 million, the company acquired a fleet of trucks to move the mineral concentrates from the mine site to the rail terminus at Whitehorse, made improvements to the railway right-of-way, which included construction of a 675-foot tunnel, and acquired additional locomotives and flat cars. Currently, two-thirds of the company's rail traffic is Anvil concentrates.

The White Pass extends 110.7 miles from Whitehorse to Skagway.

At Skagway, the White Pass & Yukon route operates a passenger station and two rail-marine terminals. The bulk terminal used to load mineral concentrates from the Anvil Mine onto ships destined for extracontinental ports, consists of a 1,400-foot wharf, warehouse and conveyor belt. The dock was used by 26 ships in 1975.

The second dock is used to berth the company's two container ships (with a capacity of 270 containers each, plus bulk fuel), barges which bring in gasoline for trans-shipment by rail to the Yukon, and cruise ships which arrive almost daily in the summer. The container-passenger dock which is 1,000 feet long, has seen considerable service and although it has more than adequate capacity in winter, it does have difficulty accommodating all passenger traffic at times during the summer season. About 170

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ships used this dock in 1975.

At Whitehorse, besides the company station, the company operates two other terminals.

1. A bulk transfer terminal, five miles south of Whitehorse, which consists of a yard and siding.

At the site the special top-loading bathtub-shaped containers carrying Anvil lead-zinc concentrate are transferred from trucks to rail flat cars.

2. Near the station in the City of Whitehorse are facilities containing a warehouse, storage and rail loading facilities. Here mineral concentrates and asbestos fibres from other mines are loaded onto rail cars and gasoline and inbound general merchandise traffic, which arrives mostly in containers, is unloaded.

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The White Pass and Yukon

operates a narrow gauge line which is thirty-six inches wide rather than the fifty-six and a half inch standard gauge. The weight of rail varies up to ninety-five pounds with the presence of some sixty-five and seventy-two pound rail on the Canadian side, limiting loading to seventy-one tons gross car weight. This lighter rail could be replaced resulting in an increase in permissible weights.

Since a White Pass flat car weighs about twelve and a half tons, the cargo capacity per car is currently forty-eight and a half tons. Thus, on a weight basis, a car could carry seven forty foot lengths of pipe. However, White Pass clearance restrictions suggest the limit would likely be six lengths per flat car. White Pass officials have indicated that the carriage of sixty foot lengths of pipe is also feasible, but that new equipment would be required.

On the Alaskan side, the maximum curvature is 23 degrees and the maximum grade is 3.9 percent with an average grade of 2.6 percent between Skagway and White Pass Summit, a distance of twenty miles. But it should be noted that about eighty percent of the White Pass traffic is southbound and hence down grade on steeper sections. The Canadian section has much gentler grades.

The maximum speed on a line is twenty-five miles per hour. However, there are numerous speed restrictions along the way and the train

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takes seven to eight hours to travel the hundred and ten miles. This photograph shows one of the railway's twenty locomotives.

Traffic on the White Pass for the most part consists of mine products destined for markets via Skagway and petroleum products and consumer and industrial goods for the Yukon. Mine products traffic currently totals sixty hundred and fifty thousand tons annually, while Yukon bound traffic is about one hundred thousand tons.

Outbound traffic originates at four mines in the Yukon, Anvil, Clinton Creek, United Keno Hill and Whitehorse Copper, and one in British Columbia, Cassiar Asbestos. Nearly 3/4 of the traffic is lead or zinc concentrates originating at the Anvil Mine. The bulk of the remainder is asbestos fiber from mines at Clinton Creek and Cassiar.

This photograph shows the sealed box-type containers carried on flat cars. These containers are used for asbestos and for inbound goods.

Because of its isolated location and unusual equipment, narrow gauge, the capacity of the railway needs to be considered in terms of rolling stock as well as capacity of road bed. The company estimated that the current rolling stock could carry in the order of two million tons of traffic by optimizing train operating and terminal schedules and procedures. The capacity could be increased further through the additional sidings at relatively low cost. Current traffic is in the order

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1 of seven hundred and fifty thousand tons but some of the
2 rolling stock is also used to transport excursion
3 passengers between Skagway and Bennett. The 1970
4 traffic--in 1975, this passenger traffic amounted to
5 fifty thousand people.

6 In contrast to the rolling
7 stock, the road bed is capable of carrying substantially
8 greater volumes of traffic than it does now. The
9 exact limit is uncertain, but the Yukon Railway Study
10 states that the existing narrow gauge line from
11 Whitehorse to Skagway is considered capable of handling
12 all forecast traffic levels, 2.3 million tons outbound
13 and two hundred and fifty thousand tons inbound, without
14 major upgrading.

15 The White Pass and Yukon could
16 logically play two roles during pipeline construction.
17 As part of a route for pipe of coastal or extra-
18 continental origin and as an emergency route to the
19 Mackenzie Valley or Point Barrow routes become
20 unavailable.

21 The amount of pipe that will
22 originate near tidewater is unknown, but testimony
23 before the National Energy Board indicates that
24 Canadian Arctic Gas would have to obtain some pipe from
25 extracontinental sources. Such pipe, which would arrive
26 in forty or sixty foot lengths could be carried by
27 rail from Skagway to Whitehorse, and then by truck
28 by the Dempster Highway route to the Mackenzie Valley.

29 Should the Mackenzie Valley
30 route be disrupted, the White Pass railway-Dempster

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1 Highway route could be used as an alternative for the
2 shipment of cargoes destined for the delta area.

3 The foregoing indicates that
4 during pipeline construction, the increase in traffic
5 on the White Pass and Yukon Railway is likely to be
6 fairly small unless an emergency situation arises on
7 the Mackenzie Valley route.

8 Now, if I might turn to the
9 next mode, air services.

10 THE COMMISSIONER: Sorry.
11 What was that last--what was your conclusion there,
12 Mr. Hagglund?

13 A My conclusion was that
14 the traffic would be fairly small unless an emergency
15 situation should arise on the Mackenzie Valley route.

16 Q And you discount the
17 possibility of a substantial quantity of pipe being
18 purchased offshore and delivered via Skagway?

19 A Well, the best indications
20 we have, I think, are provided by Canadian Arctic Gas.
21 I'm not sure about Foothills but most of their pipe
22 would be purchased in Canada.

23 Q Yes, Foothills would
24 have less difficulty obtaining all of its pipe than
25 Arctic Gas.

26 A That's correct. That's
27 absolutely correct.

28 Air services are provided and
29 controlled under the Aeronautics Act, which empowers
30 the Minister of Transport to supervise all matters

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connected with aeronautics. In order to carry out the responsibilities of the act, the Minister has two operating agencies; the Air Transport Committee of the Canadian Transport Commission and the Canadian Air Transportation Administration of Transport Canada.

The former is concerned with economic regulation of commercial air carriers and the latter, that is the Transport Canada, is responsible for the provision and operation of air facilities, the prescription and enforcement of regulations for safety, rules of the air and licensing of aircraft and personnel.

In the Mackenzie Valley, the main air route from Edmonton is via Peace River, High Level, Fort Simpson, Wrigley, Norman Wells, and Fort Good Hope to Inuvik. An eastern route from Edmonton extends via Fort McMurray, Fort Chipewyan and Fort Smith to Hay River; that's the one we came up on yesterday, I guess, or Yellowknife. A western route from Edmonton is provided via Grand Prairie, Fort St. John and Fort Nelson to Fort Simpson.

Air tracks are classified as either airways, on which positive air traffic control is maintained, or air routes on which separation is achieved by adherence to established rules for use of altitude and in certain instances, on advisory services.

The tracks are generated by two types of electronic navigation aids, the low frequency non-directional beacon and the very high

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1 frequency Omni Range (VOR/DME). The former are
2 located, that's the NDB at all the nodes of the
3 network in the Valley and provide directional navigation
4 information to aircraft. These airways are designated
5 as LF Airways. The airways generated by the VOR/DME
6 stations are designated as Victor Airways. It's
7 probably too small to read from the back of the room
8 there.
9
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1 This is a photograph of a
2 VOR/DME station, specially designed for operation in
3 the Canadian Arctic. It is a radio transmitter for
4 providing continuous position information to aircraft
5 in the form of radial tracks from the station, measured
6 in degrees from true north, as well as the slant range
7 from the aircraft to the station, measured in miles.
8 VOR/DME stations are now in service at High Level,
9 Fort Simpson, Norman Wells, and Yellowknife. Further
10 stations are being established at Hay River, Wrigley,
11 Fort Good Hope, and Inuvik to provide complete service
12 in the valley and it should be in service by early
13 next year.

14 This is the terminal building
15 in Inuvik, and the control tower, and in the aviation
16 system there are the airports. The airport is the
17 interface between the air transportation system and
18 the community. In the Mackenzie Valley there are 23
19 airports. Most of the airports are either owned and
20 operated by Transport Canada, or by the Territorial
21 Government.

22 In 1974, Cabinet approved
23 a policy for the upgrading of air facilities in the
24 Arctic, and it had an impact on the Mackenzie Valley
25 too -- or will have. The policy defines three airport
26 categories and sets minimum standards for each. The
27 program will now cost in the order of 80 to 100 million
28 where we estimated something like 60 million first
29 earlier, and it will be completed over an eight to
30 ten-year period. All funding will be provided by the

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Department of Transport, except those capital costs of common use equipment, that is equipment which can be used by both the airport and the community, which will be funded by the Territories and Indian and Northern Affairs.

MR. SCOTT: Q What is the completion date of that program?

A The completion date is probably seven to eight years from now.

Q Thank you.

A Roughly. It depends on how much money we get each year from Parliament, and how much we can do, as well.

Now in the different categories, the Minister of Transport will operate the Category A airports, and the Territorial Government will operate the Category B and C airports. Native northerners will be trained for airport operation, communications and weather observation duties, and I might add there that we have had extensive consultation with the bulk of the native communities affected, and we have left the decision to them as to whether they wish to participate in managing the transportation system in their community, and in most respects -- all respects so far, the answer has been positive and we're now just about to engage in an extensive training program. This slide, by the way, was prepared some time ago, and consequently the program expenditures that show at the bottom are no longer precise, but

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they do show the order of magnitude and also indicate the trend which has been an approximate doubling, as you will notice, from 1974, in federal expenditure on airports in the Arctic.

This slide, which I don't think anybody can read at the back, depicts the minimum standards -- just remember the fact that we have minimum standards for the various elements in each category airport. That is runway, lighting, approach aids, navigation aids, passenger and aircraft facilities, communications and meteorology. In the Mackenzie Valley, the Category A airports are Inuvik, Norman Wells, Fort Simpson, Hay River, and Yellowknife. The Category B and C airports are Aklavik, Arctic Red River, Fort McPherson, Tuktoyaktuk, Fort Good Hope, Fort Norman, Rae/Edzo, Lac La Martre, Rae Lakes, Snowdrift, Wrigley and Fort Providence.

This is a photo of a P.W.A. (Pacific Western Airlines) aircraft. P.W.A. is the largest air carrier in the Mackenzie Valley, operating a Class 1 service with Boeing 727 and 737 jet aircraft from Edmonton to Fort Smith, Hay River, Yellowknife, Fort Simpson, Norman Wells and Inuvik. Two 727 aircraft are based in Calgary and are used mostly in the Mackenzie Valley. Four Hercules aircraft are based in Edmonton for cargo operations and 12 - 737 aircraft are based in Edmonton and Vancouver, of which three are usually routed to the Mackenzie Valley daily.

This is a diagram of the

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1
2 routes of the various air carriers operating in the
3 Mackenzie Valley.

4 Transair operates a Class 2
5 service three times a week between Winnipeg and
6 Whitehorse via Churchill and Yellowknife, using an
7 F-28 jet aircraft. I understand sometimes they use
8 737s as well. Although unfortunately not shown on
9 this diagram, Northwest Territorial Airways operates
10 a Class 3 service from Yellowknife to Port Radium,
11 Coppermine, Lady Franklin and Cambridge Bay. Its
12 fleet comprises three Douglas DC-3 and two DC-6
13 aircraft. Ptarmigan Airways connects Yellowknife
14 with Fort Reliance, Snowdrift, Rae/Edzo, and Lac La
15 Martre. Simpson Air operates a service between
16 Wrigley, Fort Simpson, Fort Liard; and Air Providence
17 connects Fort Smith, Hay River, Fort Providence and
18 Fort Simpson.

19 Northward, an extensive
20 Class 3 service is operated by Northward Airlines
21 between Old Crow, Aklavik, Inuvik, Tuk. Fort McPherson,
22 Arctic Red River, Fort Good Hope, Norman Wells, Fort
23 Norman and Fort Franklin, using Fairchild F-27 and
24 deHavilland Twin Otter aircraft. This photograph
25 shows a Northward Twin Otter equipped with floats.

26 In addition to these
27 services, numerous charter operators are licenced
28 in the Mackenzie area.

29 Now with respect to air
30 facilities, the two proponents have adopted differing

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approaches to the air transportation requirements of the pipeline.

Arctic Gas indicates that the airports at Inuvik, Norman Wells, Fort Simpson and Hay River would be used extensively. They would also construct a 6,000-foot jet airstrip at Travailland Lake, one near Trout Lake and possibly one at Parsons Lake. All compressor stations accessible by road would be equipped with helipads and those not accessible would be provided with 2,400-foot STOL short takeoff and landing strips. These would be between Fort Good Hope and Wrigley.

During winter construction periods, about 8,000 men would be employed on the pipeline. The peak traffic to the construction sites would occur in October and November, and the peak of returning traffic from the sites would occur in April and May. This would entail an estimated movement of about 133 men per day, equivalent to one 737 aircraft trip from Edmonton per day. STOL aircraft, such as the deHavilland DHC-6 (Twin Otter), would be used to move men and materials between the jet strips and the construction sites. During these peaks, this would amount to about seven trips per day, requiring one aircraft for each construction site.

The Christmas period will produce a larger peak traffic. If a one-week outbound and a one-week inbound traffic period is assumed, 8,000 men would be moved by an average of eight round

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trips per day. On a 24-hour basis, this would involve about two aircraft.

During the off-peak periods, the consortium estimates that attrition, emergency returnees and so on will average one trip per man per season. This is equivalent to 38 men per day in each direction. Additionally, an average of about 20 to 40 tons of supplies will be required daily, equivalent to two or three aircraft trips from Edmonton. The consortium plans to use chartered aircraft for these operations. Lockheed Hercules aircraft would be used for premium bulk freight movements from Edmonton. The consortium proposes to provide additional passenger facilities at Inuvik, Norman Wells, Fort Simpson and Hay River airports, for pipeline personnel so as not to interfere with normal traffic. They also propose to establish hangar and storage facilities at Inuvik, Norman Wells and Fort Simpson.

During the operational phase, the consortium plans to use helicopters and STOL multi-purpose transport aircraft for servicing the compressor stations, small fixed-wing aircraft for pipeline patrol, and Hercules aircraft for bulk freight movements. These aircraft would be either consortium owned or chartered.

The Foothills proposal indicates that extensive use will be made of all existing air services in the general area of the pipeline right-of-way. The use of fixed-wing aircraft would,

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1
2 however, be limited to the movement of personnel and
3 supplies to existing airports. Foothills does not plan
4 to construct any permanent landing strips to accommo-
5 date fixed-wing aircraft, however, water and ice
6 strips may be used as temporary measures.

7 Extensive use of helicopters
8 is planned, and each compressor and stockpile site
9 would be provided with a helipad. The specific level
10 of activity is not known, however it is likely to be
11 similar to that estimated for the Arctic Gas requiremen

12 The gas processing plants in
13 the delta will have their own aviation requirements.
14 Current plans are to use the existing P.W.A. service
15 to Inuvik and an air shuttle service to both Parsons
16 Lake and Taglu.

17 It is expected that some 670
18 passengers a month would arrive or depart during the
19 construction phase. This would add about seven
20 passengers on each P.W.A. flight (Inuvik flight) each
21 day. This additional demand can be met quite readily
22 with P.W.A.'s fleet.

23 Although definite requirements
24 have not yet been established, it is expected that the
25 aviation facilities at Fort Simpson, Norman Wells,
26 and Inuvik including commercial areas, terminal facili-
27 ties, control towers or taxiway may be required. An
28 air traffic control tower would probably be required at
29 Norman Wells and Hay River. An air traffic terminal
30 control unit may be required at Inuvik and increased

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1
2 staff may be required for the Edmonton air traffic
3 control centre.

4 Now the Federal Government
5 expects that industry would build and operate any
6 new air facilities that are exclusively for pipeline
7 use. They would, however, be required to comply with
8 Department of Transport standards.

9 Now, turning to the northern
10 road system. With the exception of the wartime-con-
11 structed Alaska Highway, administered by the Department
12 of Public Works and Transport Canada, all roads in
13 Northern Canada are the responsibility of the
14 Department of Indian Affairs & Northern Development.
15 prior to 1957, road construction in Northern Canada
16 was on a piecemeal basis. Initially where river
17 portages were required and later in support of resource
18 development. However in that year a Territorial roads
19 policy was adopted by the Federal Government and
20 Territorial Councils to establish a network of roads
21 to serve the development and communications needs of
22 Northern Canada. The policy, which subsequently was
23 modified on a number of occasions and retitled "the
24 northern roads policy" in 1965, defines the types of
25 roads and sets the standards to which they are to be
26 built. Permanent access roads, initial access roads,
27 and tote trails are financed on a cost-shared basis
28 with resource developers who are also responsible for
29 maintenance. All other roads are financed by the
30 Federal Government with funding for maintenance divided

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1
2 between Federal and Territorial Governments on an
3 85:15% basis. However, as a result of federal-
4 Territorial agreements, the maintenance work itself
5 is carried out by the respective Territorial Govern-
6 ments.

7 This map -- again you
8 probably can't see it at the back -- shows the road
9 network in Northern Canada, both existing, under
10 construction, and or proposed. The black lines indi-
11 cate existing roads, the orange lines represent roads
12 under construction, and the red and dotted lines
13 (dotted red) indicate possible future roads. For
14 instance, there's one extending out from Great Slave
15 Lake to Coppermine. It's a gleam in somebody's
16 eye right now.

17 In the Northwest Territories
18 only two areas are served by roads. In the lower
19 Mackenzie area, 115 miles of all-weather road which
20 will ultimately be linked to the Dempster Highway in
21 the Yukon serves the communities of Inuvik, Arctic
22 Red River, and Fort McPherson. However, until
23 ferries are installed on the Peel River at Fort
24 McPherson and on the Mackenzie River at Arctic Red
25 River, surface connection between the three communities
26 is limited to the winter months when ice bridges are
27 in operation.

28 In the upper Mackenzie and
29 Great Slave Lake areas, a branching system consisting
30 of 1,100 miles of all-weather road connects ten

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communities and reaches about 20,000 inhabitants.

All the branches ultimately connect to the Mackenzie Highway and this road south of Enterprise provides the only road link to Southern Canada. Edmonton, the nearest major city, is 615 miles south of the N.W.T. border.

This slide shows a portion of the Mackenzie Highway completed in 1973 between Inuvik and the Dempster Highway junction north of Arctic Red River. With the exception of a few miles near Hay River, and the Yellowknife Highway, all highways in the Territories are gravel surfaced.

There's a photo of the Dempster Highway which could be used as a pipeline logistics route to the delta. The highway is now over 60% built and completion is planned for '79-80. The highway could accommodate heavy vehicles, although the southern 78 mile section constructed in the early 1960s to development road standards has poor geometrics and some bridges incapable of withstanding the maximum permitted gross vehicle weights. Some upgrading of the most critical portion is planned for the near future, and further plans are being prepared for improving the remainder.

Here's a photo of a winter road. In addition to all-weather roads, winter roads also provide an important means of surface access in some areas. These roads are mainly resource-oriented and change almost every year, depending on the site

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selected for exploration and logistic plans of the private interests who build and operate them.

This one is between Inuvik and Tuk on the Mackenzie Highway, up against the river, operated by the oil industry.

This is a map of the mileages of the various road segments and I'll use it to describe the Yukon road network.

The Yukon road system has 2,240 miles of road providing year-around access -- surface access to all communities except Clinton Creek and Old Crow. Clinton Creek suffers from an interruption during freezeup and breakup of the Yukon River, while Old Crow is over 100 miles from the nearest road and must rely on air service.

In addition to a nearly complete internal system, the Yukon also has road access over several routes to adjacent jurisdictions. The most important is the Alaska Highway, which besides being a significant road for tourists, also connects the Yukon to Edmonton (1,005 miles from the Yukon border), and one of its main supply centres. In addition, there is another connection to the continental road system via the Stewart-Cassiar road (British Columbia Highway 37) from Upper Liard (near Watson Lake) to the B.C.-Yukon border. Major connections to Alaska are the Alaska Highway and its branch, the Haines cut-off road, which provides access to the panhandle seaport of Haines. In the summer there is also a connection

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to Alaska via Dawson and the Boundary Road.

Now turning to this Carcross Skagway -- here's a photo of it -- this highway when completed could be used for direct road shipments from Skagway to Inuvik. This road is now completed to near the B.C.-Alaska border on the Canadian side, although some reconstruction and surfacing is required and plans exist to complete the highway by 1978. The Alaska segment may be completed as early as 1977.

The Haines Road could also be used as an alternative to the rail system. The use of that logistics route would permit direct truck shipment to Inuvik via the Alaska Highway to Whitehorse and from there on to Inuvik. This slide shows the Alaska Highway near the Haines Junction. This highway is generally in fair condition.

With the exception of the bridges on the southern part of the Dempster Highway, others in the Territories along possible pipeline logistics routes are built to adequate standards. This is the Kakisa bridge on the Mackenzie Highway between Enterprise and Fort Simpson.

All river crossings in the north, however, are not provided with bridges. These include the Peel and Mackenzie Rivers on the Dempster route, and the Liard crossing at Fort Simpson, and the Yellowknife Highway at Fort Providence.

This is a ferry in service at the Liard River crossing at Fort Simpson. It has

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an 80-foot length and a capacity of 65 tons. Any pipeline traffic shipped by road between May and October for destinations below Fort Simpson would have to utilize this ferry, which would obviously impose a constraint on the amount of traffic which could be shipped via this route in any given period.

During winter, river crossings are achieved by ice bridges which are essentially a graded track on the river ice. These bridges can be autmented by flooding in order to accelerate usage or increase strength. They are normally open from mid-January to mid-April. This photograph is the Liard ice bridge at Fort Simpson on the east side.

Now in the north, trucking is regulated by configuration and weights standards, and by licencing of vehicles and services.

In the Northwest Territories combination vehicles are limited to 65-foot length and 110,000 pounds gross vehicle weight. In the Yukon the limits are 70 feet and 118,000 pounds.

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Various types of truck configurations are in common use in the Territories. This slide shows a 5 axle flatbed semi-trailer, a type of vehicle used for long distance trucking by the oil and gas companies in the North.

Here's an example of a combination vehicle known as a semi-trailer with a pup. This particular vehicle has eleven axles. Such units can have a maximum length of sixty-five feet in the Northwest Territories and seventy feet in the Yukon.

This map depicts the freight traffic flow by truck to the communities in the Northwest Territories serviced by road as of 1971. The size of the circle indicates the traffic level in tons. The clear areas show traffic originating in Edmonton and the shaded areas show traffic originating in Hay River. As might be expected, the largest proportion of traffic flows to Yellowknife and Hay River.

Here's an example of the type of highway equipment that would be used for pipe transportation for the construction logistics. Such units can accommodate pipe lengths up to eighty feet.

A heavy duty tractor and pole trailer may typically weigh 28,000 pounds. The allowable net loads would therefore be 82,000 pounds and 90,000 pounds in the Northwest Territories and Yukon respectively. Two nominal eighty foot lengths of forty-eight inch pipe weigh 55,328 pounds and three weight 82,992. The latter would slightly exceed the

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weight limit. Further, eighty foot pipe lengths could result in a total vehicle length in excess of the allowable overall lengths of sixty-five and seventy feet in the Northwest Territories and Yukon respectively and permits would be required.

This is a calculation to demonstrate the order of magnitude of traffic which might be expected on the Mackenzie Highway between Enterprise and Fort Simpson for pipeline logistics.

The calculations are based on the assumption of a thirty mile per hour loaded and forty mile per hour unloaded average truck speed, twenty-four hour per day operations with an actual running time of nineteen hours and an operating season of 365 days for Axe Point and 260 days for Fort Simpson. Arctic Gas cargo requirements were used for the calculations. Cargoes to Fort Simpson would require thirty-four one-way trips per day utilizing sixteen tractor-trailer units and cargoes to Axe Point would require thirty-seven one-way trips per day, utilizing eight tractor-trailer units. That gives you an indication of the increase in traffic that could occur.

It may be anticipated that the pipeline traffic would have impact on the highway system in the areas of traffic, road conditions, river crossings, regulations, the trucking industry and community resupply. I'll deal with each of these items in turn.

As shown in the sample

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calculation, Arctic Gas traffic would require about nineteen round trips to Axe Point and about seventeen to Fort Simpson. On the most heavily travelled parts, between Enterprise and Axe Point, this would imply an average interval of about twenty minutes between truck movements in both directions on a twenty-four hour basis.

Turning to road conditions.

The dust conditions in which this traffic--the dust conditions which this traffic would produce in the summer could impede non-pipeline traffic and increase the risk of accidents. This problem could be alleviated by the application of calcium chloride and/or the provision of paved passing zones. Heavier traffic might also lead to accelerated road deterioration. And an increased program of gravelling and grading may be required.

River crossings. Ice bridges

may be expected to deteriorate more rapidly as a consequence of heavy traffic. However, this is not expected to be a serious problem and can be corrected by flooding as required. All bridges on possible pipeline traffic routes are adequate for the heavy traffic except those on the southern seventy-eight miles of the Dempster Highway. Ten of a total of sixteen would require reconstruction or reinforcement.

The only ferry which would be required for pipeline traffic is that which crosses the Liard River at Fort Simpson. Current plans of the proponents, based on the need to cross the Mackenzie

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River at Camsell Bend on the ice, or the use of winter roads further down river would imply that most traffic would cross the Liard on the ice bridge during the winter months.

With respect to regulation. The allowable gross weight, gross vehicle weight is 110,000 pounds in the Northwest Territories and 118,000 pounds in the Yukon. As pointed out earlier, three section loads of eighty foot pipe would exceed former limit. Additionally, maximum permissible lengths would be exceeded. Overlimit Permits are available at roadside weight scales. The permit fee could contribute towards increased maintenance costs.

With respect to the trucking industry itself. The impact of pipeline traffic on the northern trucking industry is not expected to be significant with respect to equipment demands since the type and magnitude of traffic will require new, heavy duty, special purpose vehicles, not generally available in the North.

Transportation costs and hence rates, could increase significantly as a consequence of migration of labour to pipeline jobs. This might be especially true in the trucking industry since relatively large numbers of trucks will be employed on a twenty-four hour basis for pipeline work.

With respect to community resupply. Resupply on other non-pipeline traffic may be required to compete for labour resources, as I just mentioned, and could lead to increased trans-

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portation costs.

This illustrates the dust problem just mentioned. Conditions such as this make passing hazardous or impossible, increasing travel time and the accident rate. In the event of a pipeline, this problem could be reduced either by more intensive dust abatement program or by confinement of the major traffic movements to the winter months.

Now, the last mode. Marine services.

MR. SCOTT: I wonder, Mr. Commissioner, if this might be an appropriate time to take a break. Our coffee is ready. Perhaps Mr. Hagglund might like a little rest from reading.

MR. COMMISSIONER: Fine.

(PROCEEDINGS ADJOURNED FOR A FEW MINUTES)

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(PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT)

MR. SCOTT: Would you carry
on please.

A Yes, I will. The last
mode that I would like to cover is marine services
and as I said earlier, I want to dwell a little in
somewhat greater detail on it because of its--it's
perhaps the most critical mode because it can offer
heavy lift, large volume service, and it is at the
same time constrained by the navigation season and
by the relative inability to vary the factors of
reduction in transportation, such as floating equipment,
the way itself and the terminal facilities in the
short-term to accommodate the traffic peaking which
pipeline cargoes will constitute.

Now, the waterway itself
may be considered in five sections. Again, I apologize
for the small slide and Derek, perhaps you could
point to some of the areas as we go along please.
First of all, the Mackenzie River section. My apologies
to other operators on the river. This represents the
Northern Transportation Company Limited route network.

The Mackenzie River section
includes Great Slave Lake and the Mackenzie River from
its head at the western end of Great Slave Lake to
its estuary on the Beaufort Sea. Great Slave Lake
provides water routes between Hay River, the northern
rail terminus, and the lake communities of Yellowknife,
Pelly, Snowdrift and Resolution. The Mackenzie
River provides a continuous 1100 mile route serving

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Fort Simpson, Wrigley, Fort Norman, Norman Wells,
Fort Good Hope, Arctic Red River, Fort MacPherson,
Aklavik, Inuvik and numerous other small points and
exploration sites.

Secondly, the Great Bear
section. This is formed by Great Bear Lake, the third
largest lake in Canada, and the Great Bear River which
joins the Mackenzie River at Fort Norman. The rapids
on the Great Bear River of eight miles length, prevent
continuous waterway traffic. They are bypassed by a
portage road. This section serves Fort Franklin,
the CNT relay station at Glacier Bay, the silver mines
at Port Radium and Camsell River, together with several
fishing lodges on the lake.

Next, the Athabasca section
comprises the Athabasca, the Slave and Peace Rivers
as well as Lake Athabasca. The system's southern
terminus is at Waterways, Alberta at Fort McMurray.
It extends down the Athabasca River to Lake Athabasca
serving the lake communities of Fort Chipewyan,
Dushell, Fond de Lac and Stony Rapids. The Slave
River connecting Lake Athabasca and Great Slave Lake
is not navigable between Fort Fitzgerald and Fort Smith
because of the Pelican Rapids.

Lastly, the Arctic coast
section. The coastal waterway extends from Alaska
in the west to the Boothia Peninsula in the east,
serving the island and mainland communities of Sachs
Harbour, Paulatuk, Holeman, Coppermine, Bay Chimo,
Cambridge Bay, Gjoa Haven and Spence Bay as well as the

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1 DEW line stations and oil and gas exploration sites.

2 The Liard River section; this
3 includes the Liard River from Hell Gate, B. C. to its
4 confluence with the Mackenzie at Fort Simpson and
5 its tributary, the Nelson River, upstream to Fort
6 Nelson. This section is not shown on the map. However,
7 the water depths are insufficient for the route to
8 be considered for major pipeline shipments.

9 THE COMMISSIONER: That's the
10 Liard?

11 A That's correct, sir.

12 This is a barge tow on the Mackenzie River. The barges
13 are assembled in a box configuration and the towboat
14 pushes from behind as though the whole tow were a
15 single vessel.

16 Hay River is the main southern
17 terminus of the waterway. It is located on the south
18 shore of Great Slave Lake and the Hay River delta where
19 the small islands and channels of the delta form a
20 natural harbour. It is served by highway, air, and
21 rail connections from the south. Over a mile of
22 wharfage is available for dry cargo loading and there
23 is also a total of 1350 feet of dock for bulk fuel
24 transfer. Tank facilities at the terminal can store
25 4.9 million gallons of oil or gasoline.

26 This photograph shows part
27 of the NTCL Hay River facilities. The platform in the
28 center is the synchrolift for raising tugboats and
29 barges out of the water for repair and winter storage.
30 The building to the left is the maintenance facility

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for repair of vessels. It's reputed to be the largest building in the Territories.

At Norman Wells, Imperial Oil Ltd. owns a steel pile wharf 200 feet in length shown here and a 14.7 million gallon storage facility. The Department of Public Works operates a public wharf having two 200 foot faces and 2.2 acres of work space.

Inuvik. The terminal facilities include the 286 foot length DPW public wharf, 2.8 acres of storage and warehouse; the NTCL terminal with a steel sheet pile wharf of 500 feet length, 27 acres of storage and warehouse; KAPS transport, timber wharf of 200 foot length, 9 acre yard; Imperial Oil Ltd., 6 million gallon storage; and Northern Canada Power Commission, 3.5 million gallon storage. This photo shows a part of the KAPS Transport facility at Inuvik.

The aggregate annual traffic movement on the river, both southbound and northbound, and in total is shown on this table for the period 1970 to 1975. Although cargoes have exhibited a long-term growth rate of about 9 percent annually, traffic peaked at 476,853 tons in 1972 and the past three years have experienced a decline as you can see in the right hand column.

THE COMMISSIONER: It's the aggregate of all the--

A That is correct, sir.
Traffic patterns are fairly stable. Resupply traffic

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levels are fairly constant, although exploration traffic is highly variable. The traffic flow for MTCL 1974 cargoes are shown in this and the next slide.

The thickness of the arrow corresponds approximately to the relative traffic levels. Approximately 95,212 tons of bulk POL entered the NTCL system at Hay River, 77,247 tons of bulk POL entered at Norman Wells. Generally POL entering the system at Norman Wells is for community resupply and is shipped upstream as far as Yellowknife and downstream and along the Arctic coast as far as Spence Bay. POL entering at Hay River is also distributed over the entire system but with lesser amounts to communities on the Arctic coast.

This slide shows the dry cargo handled by NTCL. Dry cargo from Hay River flows to all points with Inuvik and the exploration sites predominating. Shippers include Federal Government departments and agencies, the Territorial Government, Eskimo co-operatives, church missions, construction companies, stores and private individuals and oil and gas exploration interests.

In 1974, 100,810 tons of dry cargo entered the NTCL system at Hay River and 4,972 tons at Norman Wells which was petroleum products shipped in drums. Dry cargo shipped by waterway to Fort Simpson is now negligible. This is as a consequence of highway access to that community.

This shows the 1976 licensed

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capacity of the freight carriers on the Mackenzie River. As can be seen, Northern Transportation Company Limited operates the largest carrier service with 195 vessels and KAPS transport the second largest service with thirty vessels. I will now deal with each of these larger carriers individually.

First with NTCL. It's a Crown corporation which reports to Parliament through the Minister of Transport. It operates under Part VIII of the Financial Administration Act and is listed in Schedule D to the Act as a proprietary corporation; that is, one which is responsible for the management of commercial and industrial operations involving the production of or dealing in goods and the supplying of services to the public and which is ordinarily required to conduct its operations without appropriations.

The company provides the single largest common carrier, tug and barge service in the Mackenzie River system, holding eighty-one percent of the total licensed cargo capacity in 1976, 91,407 Gross Registered Tons. Total cargoes in 1975 amounted to 326,000 tons on the river. The company also provides supply operations on the Arctic Coast from Alaska to Spence Bay, trucking from Calgary and Edmonton to the Northwest Territories by a subsidiary, Grimshaw Trucking and Distribution Limited, hovercraft operations for the oil industry in the delta and a coastal service from Churchill to six communities on the west side of Hudson Bay, the Keewatin area.

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The NTCL fleet, excluding the Keewatin, currently consists of twenty-eight tugboats of which four operate on the Athabasca section, three on the Great Bear section and the remainder on the Mackenzie section and also includes two yarding tugs. They range in size from forty feet long at 115 horsepower to a hundred and sixty feet long at 4500 horsepower. There are 167 barges, including four bow-thruster barges, ranging in size from seventy-five foot lengths, sixty-five gross registered tons, to two hundred and fifty foot lengths, fifty-six foot beam, ten foot draft, twelve hundred and fifty gross registered tons. Additionally, three coastal vessels are operated from the Tuktoyaktuk base.

This photograph shows a mainline towboat, the Kelly Hall, built in 1969 of six hundred and sixty-six gross registered tons. It's powered by two General Motors, 2100 horsepower diesel engines. It's one hundred and sixty feet long and forty feet wide and carries a crew of fourteen.

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This shows a mainline towboat taken from the barge immediately before it. This is one of those acquired in 1973 and is shown on its maiden voyage from Vancouver to Hay River via Point Barrow. On the right is the yarding tug, "Kakisa", carried as deck cargo on the barge. I was on there when that picture was taken.

KAPS Transport next. KAPS is engaged in transportation, manufacturing and construction activities, either directly or through subsidiary companies.

The Marine Division constitutes the second-largest operator on the Mackenzie River, holding about 12% of the total licenced river cargo capacity in 1976, 14,134 gross registered tons. The company is also engaged in on-highway and off-highway trucking operations in support of the oil and gas exploration industry, manufacturing activities are related to a steel fabricating service to the petroleum, environmental and marine industries, and construction activities have been in the earth-moving area in Northern Alberta.

The fleet currently consists of eight tugboats of various sizes, two service vessels used for seismic work in the Beaufort Sea, two powered barges, and 27 barges ranging in size from 45 to 812 gross registered tons.

This slide shows one of KAPS smaller towboats.

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An application by Arctic Transportation Ltd. for a licence to operate 29 vessels on the Mackenzie River currently licenced for the Marine Division of KAPS, has been made to the Canadian Transport Commission.

Lindberg Transport Ltd. is engaged in operations on the Mackenzie River and Arctic coast, oriented towards the petroleum exploration industry. The company is owned jointly by private interests and Arctic Navigation & Transportation Ltd.

The fleet comprises four towboats, 9 barges ranging in capacity from 500 tons to 1,000 tons, and one self-propelled barge. The 1976 licenced capacity is 5,399 gross registered tons, about 5% of the total river capacity.

This slide shows the towboat "Edwin Lindberg" moving the ARCNV catamaran drill barge in the delta.

Now turning to operational problems on the Mackenzie River system, and first of all, weather. This is not a significant factor in marine operations on the river proper, although fog conditions can halt traffic for short periods. Storm conditions on Great Slave Lake can cause delays in traffic between Hay River and the Mackenzie River.

Ice. Spring ice breakup in the system does not necessarily occur sequentially from south to north. The mid-portion, Fort Simpson to Fort Good Hope, breaks first, about the latter part of

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1
2 May because of high spring inflow from the Liard
3 River. The upstream and downstream reaches are
4 delayed about two weeks. The upstream section is
5 delayed as a consequence of the stabilizing effects
6 of Great Slave Lake and the downstream section because
7 of its more northerly location, and the absence of
8 major tributaries. Ice jams occur regularly at
9 some sites such as tributary junctions, sharp channel
10 bends, gravel bars and rock ledges. In the spring it
11 is not uncommon for the first barge tows from Hay
12 River to overtake the ice on the lower river reach and
13 be delayed until it is cleared. In the fall, vessels
14 returning from the north will lay up at Hay River,
15 are frequently forced by freezeup to winter at other
16 locations such as INuvik or Horn River. This prevents
17 annual maintenance work from being performed during
18 the winter months, reducing the vessels' operational
19 period the following season. In 1974, because of
20 adverse ice conditions on the Arctic coast, many re-
21 supply vessels were forced to winter at various points
22 on the coast. They were not able to return to Hay
23 River until the following season and as a consequence
24 the fleet capacity was reduced over both years.

25 Water levels. Hydrographs
26 of flow in the Mackenzie River generally follow a
27 specific pattern. During the winter period of ice
28 cover, both level and discharge generally decrease un-
29 til about mid-May, when increasing temperature and
30 snow melt runoff combine to cause spring breakup of

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the river ice cover. Level and discharge then increase during late May and June, as a result of snow melt and rain runoff in the Athabasca and Peace River systems, finally reaching the Mackenzie River. In mid-July the river begins to recede, interrupted periodically during August and September by rainstorm runoff in various tributaries. Minimum fall stage usually occurs in October just prior to fall freezeup, after water levels rise due to backwater caused by increased buildup of ice cover. Level and discharge then recede during the winter months and the pattern is repeated the following year. Variations occur from year to year.

The fall low stages are critical to navigation, being of a sustained nature due to the hot, dry fall weather conditions and the resultant recession or lessening of flows. Cold weather in late September or October causes another drop in water level as water is diverted into ice production.

The main areas in the system which limit barge draft during low water conditions are Beaver Lake, Providence Rapids, Green Island Rapids, Sans Sault Rapids, and the Ramparts Rapids.

The effect of water level variation may be illustrated by the average NTCL barge drafts in 1970 and '71 seasons which were 4.2 feet above and 4.6 feet below Norman Wells. During low water in September and October the actual operating

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1 drafts would be somewhat less. There has been a 1500-
2 series barge designed for a fully loaded draft of six
3 feet.

4 Turning to rapids. The navi-
5 gation channel through the rapids area winds back and
6 forth, and the currents vary up to 11 knots. Towboats
7 do not have the power to manoeuver a full six-barge
8 tow through the tortuous channel and an operation called
9 relaying has been developed. The tow is separated
10 before entering the rapids, and shuttled through two
11 or three barges at a time until all have traversed
12 the reach. The tow is then re-assembled and proceeds
13 to the next rapids whereupon the operation is repeated.
14 Relaying is a time-consuming operation which, together
15 with low water levels, severely reduces vessel produc-
16 tivity.

17 The channel in the rapids areas
18 is insufficient to permit passing of 170-foot wide
19 tows. As a consequence, should a tow arrive at the
20 entrance of a channel occupied by another tow proceeding
21 in the opposite direction, the arriving tow is obliged
22 to wait until the channel is clear. Estimates made in
23 respect of total river traffic during pipeline con-
24 struction indicate that the effect of the waiting time
25 would be insignificant at the rapids below Fort Simpson
26 and small on the section above Fort Simpson. For
27 example, on the 280-mile segment between Hay River and
28 Burnt Island, for pipeline-related traffic an estimated
29 9.4 tows would be required if waiting time is taken
30 into account, compared to 9.0 tows that would be required

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if tows were obliged to wait. In addition, resupply and exploration traffic may be expected to be similarly affected. In practice, it is possible that two towboats meeting at a construction could co-operatively relay for each other, eliminating the need for return movements without barges and actually increasing their efficiency.

Turning to cargo distribution.

Shippers on the system exhibit a preference to deliver cargo to the carrier at two distinct times either before the navigation season starts, or toward the close of the season. As a consequence, cargo is bi-modally distributed, which results in an uneven fleet utilization.

Now, the navigation channel is well-marked by buoys and range markers which are considered to be adequate. This photograph shows two of the Canadian Coast Guard buoy vessels, the "Dumit" and the "Eckaloo" used for maintenance and repair of marine aids on the river. The Coast Guard operates five such buoy vessels on the system, including one of dual draft which is used for operation either on the Mackenzie River or along the Arctic coast.

This is the same table as was shown previously. The relative shares of market may be illustrated by the proxy of the 1976 C.T.C. carrier licences issued on a gross registered tonnage basis for the Mackenzie River.

It is apparent that NTCL is the

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predominant firm, and therefore the price leader.

The Transport Act provides the Federal Government with legislative authority to impose economic regulation to the Mackenzie waterway. The Act is administered by the Canadian Transport Commission. It provides for both capacity and rate regulation.

In 1972, total freight cargo on the Mackenzie River was 476,853 tons, a dramatic increase over the previous year's 337,856 tons, brought about by an intensified oil and gas exploration activity in the delta. At this time, 211 licenced vessels operated on the Mackenzie River, representing a total capacity of about 93,000 gross registered tons. The fleet was taxed to maximum capacity.

As a result of this increase, and an optimistic forecast based thereon, five companies applied to the C.T.C., Water Transport Committee, for additional barge capacity. The Water Transport Committee rendered decision WTC-10-73, approving all applications as submitted by the carriers. The Committee was of the opinion that allowing for an appropriate contingent reserve of about 20 to 25%, the movement of the 1972 freight demanded a fleet having a capacity in the order of 115,000 gross registered tons and approved 1973 additional capacity for a total of 113,000 gross registered tons.

The equipment was delivered in 1973. In this same year, total system cargoes

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declined 402,777 tons as was shown on a previous slide, and have remained at about that level, even less this year. The licenced fleet capacity is 112,000 gross registered tons, whereas the criterion of the WTC-10-73 suggests that a fleet capacity of 94,000 gross registered tons could handle the 1975 391,000 demand. The total excess capacity over the C.T.C.'s appropriate contingent reserve in 1975 on the river system therefore amounts to 18,000 gross registered tons, or about 19%. The NTCL case is more severe, however, owing to the relatively greater fleet addition in 1973. The company expects about 266,000 tons of cargo this year for which a capacity of 64,000 gross registered tons allowing for an appropriate contingent reserve is required by the C.T.C. criterion. Thus in terms of gross registered tons the NTCL fleet has an excess capacity of 27,000 tons or about 42% this year.

Now it's more meaningful, I think to describe traffic in terms of ton miles rather than tons. A ton mile is one ton of cargo carried one mile within the system. This slide illustrates the NTCL fleet capacity in ton-miles, the experienced annual cargoes between 1968 and 1975, and the no-growth forecast for the immediate future. This shows that for 1975 and the immediate future, the total fleet capacity of 445 million ton miles exceeds the total demand of almost 300 million ton miles by a considerable margin. This margin is equivalent to about 48% of the actual

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1
2 traffic, and includes the C.T.C. 20 to 25% appropriate
3 contingent reserve.

4 The excess capacity on the
5 system has induced increased competition for the
6 reduced traffic. Those companies that are unsuccessful
7 in obtaining traffic to fill their capacity are
8 experiencing difficulties in meeting the costs of idle
9 equipment. In the NTCL case, the 1973 expansion of
10 both shore and marine equipment amounted to a total
11 cost of 35 million, financed almost entirely by loans
12 from Canada. As a consequence of the costs of this
13 idle equipment, together with inflation of other
14 costs, the company has experienced a continuing loss
15 position since 1973 in the order of several millions
16 of dollars, and it now has a current indebtedness
17 of about 60 million.

18 Over the longer term, resupply
19 and exploration cargoes have exhibited an average annual
20 increase of about 9%. Recently, however, as a consequence
21 of uncertainties, traffic has declined. The estimate
22 of resupply and exploration traffic given in this
23 table is based on an assumption of no-growth prior to
24 pipeline decision and the resumption of the 9% growth,
25 annual growth thereafter, if approved. It's evident
26 that if the assumption is valid, by the final year of
27 pipeline construction resupply traffic will have
28 increased to about 333,000 tons, and exploration
29 traffic will have increased to about 199,000 tons for
30 a total of 532,000 tons, including Athabasca section

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1
2
3 traffic. If the pipeline is not approved, resupply
4 traffic could decline.

5 The Beaufort Sea offshore
6 exploration drilling, commencing this year, is
7 expected to contribute a further annual cargo of
8 about 7,000 tons.

9 The cargo estimates of the
10 previous slide may be converted to the equivalent
11 requirements for mainline tows in order to better
12 visualize the situation. A mainline tow comprises a
13 4,500-horsepower towboat and six 1,500-series barges.
14 Each barge can be loaded to an average draft of
15 4.2 feet, at which it carries 1,033 tons. Thus a
16 mainline tow carries a total of 6,200 tons.

17 Based on the normal utiliza-
18 tion of floating equipment, it is estimated that in
19 1975 the 346,000 tons of resupply and exploration
20 cargo would have required the equivalent of 9.6 homo-
21 geneous mainline tows which includes about 0.5 tows
22 for the Athabasca section. The same consideration
23 produces a number of tows required for the various
24 years and components as shown on the slide.

25 This table shows the estimated
26 cargoes which would have to be shipped northward on
27 the Mackenzie River system during pipeline construction
28 period. These include the annual tonnages for either
29 pipeline proponent, the gas plant construction cargoes,
30 the resupply and exploration component, and the estimat-
31 ed requirements for the Beaufort Sea drilling operations.

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The two bottom lines show the total annual tonnages for the Arctic Gas and the Foothills alternatives.

Although actual pipeline cargoes would only be shipped over a three-year period, with one pre-construction year for wharfs and pads building, the table shows a five-year period. The data has been presented in this manner because plans for the Imperial Oil gas plant at Taglu indicates a five-year logistics program, and it has been assumed that final logistics years for the pipeline and all gas plants would coincide in order that all facilities would be completed approximately at the same time.

Other scenarios are of course possible and may evolve as the various interests refine their plans. The values and scheduling of these quantities must therefore be regarded as representative rather than absolute.

The Arctic Gas logistics are shown in the first line of the slide. Traffic would be distributed over a three-year period; in general, materials required for any winter construction being delivered the previous summer. It is planned to deliver cargo for destinations between Fort Simpson and Shingle Point on the Yukon coast by river, and destinations on the coast west of Shingle Point by ocean, via the Point Barrow route. The current schedule for traffic is given in this table. The total Arctic Gas tonnage amounts to about 1.5 million tons, if you add them up from left to right.

A pre-construction year shown

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as the second year in which wharfs and pads will be built is also shown in the table. The pre-construction year cargoes would amount to about 50,000 tons. The CAGPL consortium plans to ship 300,000 tons via Hay River, 200,000 tons via Axe Point, and 100,000 tons via Fort Simpson in the first major logistics year, and to maintain this approximate ratio in subsequent years. It is planned to ship 324,000 tons via the Point Barrow route for the Alaskan branch. These shipments could be distributed over two or possibly three years. Moreover, some of this could be moved via the Mackenzie system if capacity permits. The contingency plan in the event of impassible ice conditions on the coast, would be to use the Valdez-Fairbanks-Prudhoe Bay route or the Dempster Highway for delta cargoes only. Use of the Mackenzie River would be a last choice. The consortium estimates that a fleet of 12 barge tows, each comprising a 4,500-horsepower towboat and six 1,500-series barges would be required to transport pipeline cargoes if Hay River is the only southern terminus. If Axe Point is utilized, the estimated number of tows required is reduced to 9. This is discussed a little later.

The Foothills logistics plan is shown on the second line of the table. The plan entails a four-year period. The traffic schedule is given in the table. The plan provides for shipment of all cargoes from Edmonton to Enterprise by rail or highway, at which point river cargoes would be divided

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between Hay River and Axe Point. The company plans to make greater use of highway transport, trucking all cargoes for destinations south of Wrigley via the Mackenzie Highway, and a pipeline right-of-way road. The company has estimated that a total of seven barge sets will be required and plan to use three of those now existing as surplus capacity. It now appears from their recent submission that five barge sets would be required, but it's not clear whether they intend to use existing capacity. Use of the Point Barrow route is not contemplated at this time. A total of 92 highway tractors and 114 trailers will be required.

The delta gas plant logistics estimates are shown in the third line.

Three gas plants are planned for construction in the delta. These are Taglu, Imperial Oil; Parsons Lake, Gulf Oil; and Niglintgak, Shell Oil.

The estimated cargo tonnages for construction to be delivered by river are shown in the third line of the table. As stated previously, deliveries would be phased in order that gas plant completion would coincide with pipeline completion.

Imperial Oil plans to include the delivery of 6,600 tons during the last three years of construction via the Point Barrow route. This would be for the delivery of completed modules too large for shipment by rail or highway.

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1
2 The company has examined the limited historical ice
3 data for the Point Barrow route and has concluded
4 the risk of non-delivery is acceptable. Because of
5 the size of the completed modules, no alternate
6 contingency route would be available if the ice
7 conditions were too severe in the Beaufort Sea.
8 Delivery would simply be delayed until the following
9 season.
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Shell Canada Limited have indicated that the Mackenzie River route is preferred. However, since planning is in the preliminary stages, it is possible that as much as sixty percent of the cargoes could be shipped from the west coast via the Point Barrow route.

On the basis of 6200 dead weight ton, tow capacity and five round trips per season and on the assumption that all Parsons Lake and Niglintgak traffic would move via the Mackenzie River, it is estimated that the following barge tow requirements would obtain for gas plant logistics:

First year, 1 tow

Second year, 2.5

Third year, 2 tows

Fourth year, 3 tows

Fifth year, 1.5 tows

The resupply and exploration traffic, shown in the fourth line, is the estimate taken from the previous slide but one. It is based on the assumption of no growth prior to the pipeline decision and the resumption of the previous nine percent annual growth thereafter, if approval were to be given and it includes the Athabasca cargo to about 50,000 tons.

The Beaufort Sea drilling requirements shown in line five is constant over the period, based on a constant drilling rate. It assumes that all cargoes will be delivered by the Mackenzie River.

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On the basis of this data, it may be seen that for the Arctic Gas alternative, total river cargoes are estimated to peak at about 1.2 million tons in the third year, whereas for the Foothills alternative, the total river cargoes are estimated to peak at about nine hundred thousand tons in the fourth year.

This is a bar graph depicting the total estimated tow requirements on the system for each pipeline logistics year assuming that all traffic were to be shipped via Hay River.

The total capacity of river floating equipment is currently estimated at about five hundred million tons. Do you want to assist me there, Derek, at the slide please. The total capacity of the river floating equipment is currently estimated at about five hundred million ton miles per season or the equivalent of 12.6 mainline barge sets of 6200 dead weight tons each. This capacity is shown by the horizontal green line. The Athabasca capacity is equivalent to another 0.5 mainline barge sets.

The requirements for resupply and exploration traffic, escalated at nine percent annually over the base year are taken from a previous slide and are shown as the red and yellow areas respectively. The solid blue areas depict the tow requirements for the gas plant cargoes. The solid orange and orange and blue shaded areas show what we estimate the tow requirements would be for the Arctic Gas and Foothills cargoes respectively.

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The second logistic year requires clarification. The Artic Gas requirement is for one tow and the Foothills requirement is for 1.3 tows; extending from the top of the solid blue area to the top of the bar.

It is apparent that existing capacity is adequate to handle the expected resupply traffic during pipeline construction. However, when other traffic components of exploration, gas plant and pipeline materials are considered, the excess capacity is absorbed by the pipeline second logistics year, and further capacity is required for that year and each subsequent year.

In the Arctic Gas case, a total of 27.2 tows would be required for the peak year of which 12.5 would be for pipeline traffic, 2.1 for gas plant cargoes, and the remaining 12.6 for exploration and resupply traffic. The Foothills requirement would require an estimated 7.9 tows in the peak year.

Now, this slide--the next slide please, is a similar bar graph and similar to the previous one except that it shows the reduction of required tows for pipeline traffic by the use of Axe Point and Fort Simpson. In the Arctic Gas case, cargoes are assumed to be divided between Hay River, Axe Point and Fort Simpson, in the proportion of three to two, to one. In the Foothills case, cargoes are assumed to be divided evenly between Hay River and Axe Point.

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In the second logistics year the Arctic Gas and Foothills alternative requirements are identical, each needing one tow. In the peak year, the Arctic Gas requirement is reduced by 2.7 tows in year three and the Foothills requirement is reduced by 1.6 tows. That's from the previous slide.

Upon pipeline completion, an excess capacity situation will exist on the river. That should be evident. The excess equipment might be sold. However, as it is especially designed shallow-draft and the potential markets are overseas, delivery to such markets, if indeed they exist at all, could be prohibitively expensive. It's, therefore, conceivable that such equipment, largely or fully depreciated, could be used in indirect competition against or to the detriment of the established carriers.

A major dredging program for the river has been studied. The study concludes that such a program could be justified either in support of pipeline construction logistics or as a permanent piece of transportation infrastructure to meet the projected long-term resupply traffic growth if it were to resume. Dredging would permit barges to be loaded to deeper draft and would also eliminate the time consuming barge relay operations at rapids areas, thereby increasing the productivity of the floating equipment. The results of the study indicate that a productivity increase in the order of forty-five percent might be expected.

In conjunction with the above

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study, detailed engineering plans for the dredging program have been developed by the Department of Public Works in consultation with NTCL. The dredging program would provide a minimum channel depth of eight feet permitting six foot draft barge loadings and would realign the navigation channel in rapids areas to eliminate relaying. Channel deepening itself would increase tow capacity to 10,800 dead weight tons. Remember the earlier one with 6,200. The program could be completed over five, four or three year intervals, depending on the amount of equipment used. The three year program is considered to be the most desirable as it offers the greatest completion probability prior to proposed pipeline traffic commencement. The complete cost of the three year dredging program in 1976 dollars is estimated to be forty-five million. The annual maintenance costs are estimated to be 1.3 million.

This next slide is a stylized map of the river indicating the areas of rapids where relaying would be eliminated by a dredging program. Although a number of individual works are involved, they may generally be grouped into five areas as shown. Providence Rapids, Green Island Rapids, McGern Island Rapids, Sans Sault and the Ramparts.

Axe Point, which I will discuss shortly, as a second staging site on the upper Mackenzie, lies between the Green Island and Providence Rapids areas, and hence would eliminate the traverse of the Providence Rapids.

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Now, let's turn to dredging advantages. For dredging completion prior to pipeline traffic commencement, the additional--the numbers of additional tows which would then be required based on assumptions given in the dredging study are estimated to be for the CAGPL alternative, 6 tows and for Foothills, 4 tows.

If dredging were considered to be performed exclusively for pipeline logistics purposes, the total cost of river transportation, including fleet acquisition, operation and dredging is estimated to be for the CAGPL alternative, 135 million and for the Foothills, 92 million.

This may be compared with the non-dredging alternative. Of the CAGPL alternative 14.6 tows. Foothills alternative, 9.2 tows at total costs of \$207 million and \$126 million respectively.

Thus, for the Arctic Gas alternative, the potential total river transportation savings would be as much as 72 million and for the Foothills alternative, the saving could be up to 34 million.

These savings, however, are extremely sensitive to the available lead time for dredging and failure to start the program sufficiently early could eliminate the savings entirely.

With respect to dredging for long-term growth traffic only, it is estimated that for resumption of the previous annual average traffic growth rate of nine percent, over a fifteen^{/year}

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time horizon, a five year dredging program could produce a total transportation cost saving of about twelve million and the more expensive three year program, which would be preferred for pipeline support if time is constrained, would produce a cost saving of about three million. These savings only apply, however, following absorption of existing excess capacity and dredging solely for long-term growth, would not be economical prior to this point in time.

Currently, an Environmental Assessment Review Panel has been established under the Department of the Environment and a study funded by Transport Canada to determine the effects of the dredging program on the environment has received approval and has now begun. It is expected this study will be completed by the end of 1977. No decision with respect to dredging would be taken before the social and environmental implications are assessed.

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1
2 Except possibly for minor
3 amounts of cargo coming via the Point Barrow route,
4 pipeline construction equipment and supplies will
5 enter the Northwest Territories from the south by
6 road or rail, and be trans-shipped at major staging
7 sites for shipment to stockpile points along the
8 pipeline right-of-way. Some of the stockpile points
9 south of the northern terminus of the Mackenzie
10 Highway will be served by road but most of the stockpile
11 points along the Mackenzie Valley will be supplied
12 by barge.

13 It has been argued that all
14 cargoes should move through port facilities at
15 existing communities and that facilities should be
16 expanded as required. Because the physical geography
17 limits the degree to which the Port of Fort Simpson
18 can be expanded, the communities proposal would
19 result in 80% of pipeline cargoes being staged at
20 Hay River.

21 While Canadian Arctic Gas
22 consortium does propose to ship about 100,000 annually
23 through Fort Simpson, both pipeline proponents consider
24 that two major staging sites -- that is Hay River and
25 Axe Point -- are required to ensure a high probability
26 that pipeline cargoes will reach stockpile sites as
27 scheduled. The pipeline proponents also cite cost
28 advantages for their two-site proposals.

29 A study on the transportation
30 aspects of Axe Point recently carried out concluded that

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1
2 on this latter point (that is carried out within the
3 government) concluded that on this point of cost
4 savings, the pipeline companies appear to be correct.
5 CAGPL has indicated that the use of Axe Point would
6 require two or possibly three less barge sets; the
7 elimination of two sets would result in a saving of
8 more than \$13 million, if it is assumed that the
9 barges have no residual value after the pipeline is
10 completed. However, this cost advantage would be
11 much reduced if the Providence Rapids were dredged,
12 permitting increased barge loading and shorter trip
13 time from Hay River.

14 The study also concluded that
15 while a cost comparison should be based on one complete
16 transportation plan as opposed to another, it did
17 appear that a terminal at Axe Point would generate
18 some savings in the cost of shore-based facilities;
19 a capital cost of 12 million for Axe Point as opposed
20 to 20.7 million for Hay River comparable facilities.

21 Now the transportation aspects
22 -- that's the end of the marine mode, sir -- the
23 transportation aspects of pipeline logistics raises
24 a number of issues which I am sure are of concern to
25 many. I will briefly mention those which we have
26 identified in the submission.

27 For the railway, pipeline
28 traffic would create a demand for additional rolling
29 stock and train crews. The former might be in short
30 supply if pipeline construction were to coincide with

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1
2 a general economic upturn. The latter, that is labor,
3 might only be induced to accept postings in Northern
4 Alberta by special incentives acceptable to the rail-
5 way unions.

6 With respect to roads, the
7 impact on road transportation and road maintenance
8 would or could occur in a number of ways, the most
9 significant of which are increases in the number and
10 size of vehicles would affect road conditions, requir-
11 ing increased programs of dust abatement, gravelling
12 and grading. Bridges on the southern part of the
13 Dempster Highway would require reconstruction or
14 reinforcement, if that route were to be used. As a
15 consequence of migration of trucking industry labor
16 to pipeline jobs, resupply and other non-pipeline
17 and commercial road traffic may be required to compete
18 for scarce labor resources leading to increased
19 transportation costs.

20 In the air mode, the prospects
21 of more lucrative business could attract existing
22 operators from community to pipeline service. However,
23 the capacity of the air system is relatively flexible
24 in that additional aircraft may be readily introduced
25 to meet rising demand. Also the terms of the Canadian
26 Transport Commission licence, requiring that operators
27 require a specific service with a specific class of
28 aircraft would tend to prevent this migration.

29 It was originally intended
30 that the existing airports at Fort Good Hope, Fort

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Norman and Wrigley would be upgraded by improved runway services and approach lights. This would have provided improved facilities for use by these communities. It now appears, however, that Arctic Gas would construct new airstrips located away from these communities. This may reduce the impact of pipeline construction on these communities. However, it must be recognized that it would mean an inefficient use of financial resources, that is capital and operation and maintenance funds to provide separate airports to communities and the pipeline.

In the marine service, upon pipeline completion an excess capacity will exist on the river. The excess equipment might be sold, however, it's specially designed shallow draft equipment and any possible markets are overseas. Delivery to such markets could be prohibitively expensive and it is conceivable that such equipment, largely or fully depreciated, could be used in indirect competition against and to the detriment of existing carriers. There is now -- not now any regulatory means to prevent this situation occurring.

The marine mode is particularly important --

THE COMMISSIONER: Excuse me, Mr. Haaglund. Sorry, you threw me off there at the last turn. There is no means to prevent what competition occurring?

A There is not now any

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regulation to prevent the excess equipment which is quite evident will exist --

Q Generated by the demand.

A That's right -- from competing with the existing carriers. Now I'm not saying there won't be some regulation in effect later on, but there is not now any regulation governing that. They could, for example --

Q You mean if NTCL -- well, you go ahead.

A Well, just as a hypothetical situation, let's say CAGPL for example, were successful and they bought their own barge fleet, there is nothing to prevent them from putting that fleet into corporate operation, if you will, and actually carrying all their own cargoes and perhaps their friends' too, saying that it is their own. Much is said to happen in corporate aircraft.

MR. SCOTT: The result, Mr. Haaglund, would be to --

A Dilute the traffic that's left for the common carriers that are left to exist on the river, and they --

Q That would drive some of the marginal ones out of business.

A That's correct, yes. Probably would. You see, somebody once described earlier the smaller ones at the moment rely quite

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heavily on exploration traffic, and if they were to lose that they would probably go out of business. NTCL is the one carrier that does most, if not all, of the resupply to communities with resupply traffic.

THE COMMISSIONER: All right, let us suppose that CAGPL did purchase and operate its own fleet during pipeline construction.

A Yes.

Q What did you say was the alternative to going into business on the Mackenzie River? You indicated there wasn't much you could do with this equipment, isn't that what you said?

A Yes. I said that at the end of pipeline construction this surplus capacity which is specially designed probably would have very limited markets, if you were to get rid of it somewhere in the world, and it could be too expensive just to deliver it.

Q Yes

A And therefore all I'm saying is that what would happen to it is an unknown factor; but if it were to be used in direct competition there is no regulation now to prevent that.

Q Yes, yes, I understand.

A Now the marine mode is particularly important to the resupply function. On the basis of our estimates, it is apparent that the existing capacity is adequate to handle the expected

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resupply traffic component during pipeline construction, but certainly not the total demand. Arctic Gas, in recognition of this, has indicated that it would provide a separate dedicated fleet for pipeline traffic and our estimates agree closely. Foothills have recently indicated that five tows would be required, but it's not clear whether this would be a dedicated fleet or drawn partly from existing capacity. If this is to be a dedicated fleet based on the use of Axe Point, the estimate appears reasonable. The intentions of the gas plant builders regarding the provision of their tow requirements are not known.

Also in the marine mode there is the proposal by the proponents to establish an additional trans-shipment terminal at Axe Point. This would provide cost savings and possibly greater transportation reliability for the proponent, but could deprive the existing communities of Fort Simpson and Hay River of additional possible benefits.

A major river dredging program could reduce both the numbers of additional tows required and the transportation costs for pipeline construction. It would also provide more efficient use of the existing fleet for long-term traffic. It is, however, unlikely that the government would initiate the program for pipeline construction support prior to the N.E.B. decision; and following the decision, if there are no time constraints placed on the proponent, it may be considered too risky to

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undertake in view of the estimated cost savings sensitivity to lead time. What I mean there is we can't be dredging the river while they're trying to haul pipeline traffic.

Resupply security in terms of insufficient capacity and increased costs in all modes may well concern many. Equal treatment of all customers is a tenet of the common carrier operation embodied in transportation legislation. Resupply traffic may therefore neither suffer discrimination nor enjoy a preference.

Finally, as mentioned specifically for the highway transport, there is perhaps a general concern that pipeline construction would attract labor from the transportation industry, reducing the available supply and driving up wages and salaries to be ultimately reflected in increased transportation costs. This is certainly a possibility which requires serious consideration. While there are statutory provisions for rate regulation, it is obviously impossible to impose rate ceilings that do not permit the carrier to recover actual costs incurred. It is also important to realize that any escalation of wages and salaries will not be unique to the transportation industry and the solution to the problem, if indeed there is one, will need to encompass virtually all economic activities in the north.

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I hope you will agree with me that this description we've given you today demonstrates that transportation is a very diverse subject, embracing many disciplines, activities, businesses and professions. In order to assemble all the material for this submission, it's been necessary to contact a wide number of sources. Those who have contributed directly include both proponents, Foothills Pipelines Limited, and Canadian Arctic Gas, Imperial Oil, Gulf Canada, Shell Canada; the carriers, including White Pass and Yukon, Canadian National Railways, Streeper Brothers, Marine Transport, Arctic Navigation and Transportation, KAPS Transport and NTCL.

We have also received advise from several government departments and agents including the Department of Indian Affairs and Northern Development, Transportation Division, Engineering and Architectural Branch, the Department of Public Works, the Canadian Air Transportation Administration of the Department of Transport and the Canadian Transport Commission.

We have also drawn upon many studies and reports, too numerous to mention at this time; however, I would like to particularly mention "Motor Carriers Operation in the Mackenzie Valley", an M. A. thesis by D. R. Podmore and "Post 1955 Branch Line Railways in Canada", a doctoral dissertation by J. A. MacDonald.

To all the people who thus contributed, I would like to take this opportunity to

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1 express my gratitude. That's the end of our
2 presentation, sir.

3 MR. SCOTT: Mr. Hagglund, I
4 would like to thank you very much too for going to
5 the trouble for us with your panel to prepare this
6 very elaborate survey which is incorporated in bulk
7 in Exhibit 778.

8 Now, Mr. Commissioner, the
9 panel is, I think, available to be examined. Mr. Bayly?

10 WITNESS HAGGLUND: Mr.
11 Commissioner, could I make a request before--

12 THE COMMISSIONER: Yes.

13 A Obviously on this verbal
14 submission today and on the previous comprehensive
15 one that we filed, I should be able to answer any
16 questions whatsoever, but I've brought with me a panel
17 of experts who contributed lightly to this preparation
18 and if I could just indicate the areas of their
19 expertise, I would appreciate if any questions might
20 be directed directly to them and I stand to back them
21 up any time. Mr. Hawryszko was responsible for the
22 Axe Point Study and for the gathering of data on
23 railways. Ed Prefontaine is responsible for the road
24 section. Of course, our good lady here was responsible
25 for the rate and capacity regulations that the W. T. C.
26 conducts on the river, Mrs. LeBlanc, And Derek Evans
27 was the mastermind of the marine side of it including
28 the entire dredging study which he did without any
29 consultant support whatsoever.

MR. SCOTT: Mr. Bayly?

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Cross-Exam by Bayly

1 CROSS-EXAMINATION BY MR. BAYLY:

2 Q Well, I'd like to direct
3 my first question to the dredging mastermind, if I
4 could. I'm looking at your report on page 118 and
5 I'm interested in the last remark made with this
6 study that's referred to there, the Mackenzie River
7 Dredging Study of February, 1976, was prepared without
8 consultant assistance; the reason being this and this
9 is the question, we have been told by consultant
10 biologists of both Arctic Gas or Foothills that very
11 little is presently known about the over-wintering
12 and spawning areas of fish in the Mackenzie River and
13 I'd like to know whether your study here or the study
14 that you expect on the environmental and social impact
15 which would be completed by late 1977 will tell us
16 all we need to know about the spawning and over-
17 wintering areas, so these can be avoided by the
18 dredging program.

19 WITNESS EVANS: Yes, Well,
20 what you say is, I think, quite correct. The dredging
21 study that is referred to here was purely an economic
22 study and did not address itself at all to the
23 environmental aspects. Of course, the environmental
24 aspects were certainly recognized and as Mr. Hagglund
25 stated, there is an environmental assessment review
26 panel which has been established under the D. O. E.
27 regulations and a consultant has been hired to do the
28 studies of the Fisheries and Wildlife, particularly
29 water fowl.

30 This study, I believe, is

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actually in progress right now. Will continue through the next season, 1977, and hopefully by the end of 1977, we will have a report completed on the effects and I have to say right now, we have no idea what the effects might be, but they will certainly be considered.

Q We've heard, you see, that not only have there been no studies that can tell us what the effects of dredging or even river crossings might be because the spawning and overwintering areas aren't known but that that baseline still has to be collected before any reports can be prepared based on that that could lead us to conclusions about what the effects of dredging would be. My concern is that this might take longer than the year which you have remaining to do that and do you have confidence and do you have indications from the consultants that are doing this work, also the Department of the Environment, that they can indeed complete this work on the effects of dredging on the various fish populations in the Mackenzie by the end of 1977?

A We have indications from the consultant, yes, that they can provide sufficient data in that time. Now, I myself, am not a biologist and I am unable to assess that but that is their indication, yes.

WITNESS HAGGLUND: I could add something to that, if you wish. There is some baseline data available but under the EARP process,

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I can assure you that there would be absolutely no way that we would ever consider going forward for approval of a major dredging program until the entire environmental assessment, everything you refer to, has been adequately covered. There are even public hearings on it as well.

Q Right. Now, do you envisage and maybe this is a question for you, Mr. Hagglund, and you can pass it on to somebody else if it isn't. Do you envisage regulations in the transport industry under the various enabling legislations to ensure that communities will continue to be supplied with the goods that they require from year to year during pipeline construction and that their goods are not either delayed or bumped from cargo vessels or aircraft in preference of that of the perhaps more lucrative pipeline contractors?

A Well, I don't really visualize legislation but I certainly don't rule out this possibility. It all depends, I presume, on the recommendations of Mr. Justice Berger and what the government would like to do in this regard because it's certainly possible that you could have some legislation to protect community resupply if it were indeed threatened or you could have some sort of a transportation co-ordinating agency perhaps to ensure that some instructions are filed and that all people agree in advance and you make sure that resupply traffic is given preference. It is not put to one side.

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But, at the moment under legislation, it would be treated equally with other traffic.

THE COMMISSIONER: Your agency would be the body that would administer such legislation in infringing the common carrier principle if indeed it were an act of--

A I would say so. Yes, sir.

MR. BAYLY: Now, I gather that if the equipment was available, there wouldn't be any problem but we have indications from you and from the logistics people of Arctic Gas and Foothills that more equipment will be required either by the major carriers, whether they're air or water or wheeled carriers or that the applicants or their contractors will have to supply it themselves.

Do you have on the panel somebody who could tell us how soon you would have to place an order for barges or tugs and expect to have them arrive. What is the lead time required?

A It varies anywhere, depending on how they're constructed and Derek might wish to add something to this. It could vary from six months to eighteen months, depending on where they're constructed. For instance, in 1973, they were constructed over the winter in Vancouver and taken around by the Point Barrow route. So, really they didn't participate in the 1973 season of resupply. They just came up the river. They could be constructed

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in modules possibly and taken by rail to Hay River and
assembled there and this would shorten the time.
So, I would say at least a year to eighteen months
for the numbers they're talking about.

Q And can you give us
similar figures on the ordering of additional aircraft
that they were required, particularly in the delta
where there may be a tremendous amount of supply from
depots to both gas plants, oil exploration outfits and
to the pipeline contractors?

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A We have two experts in the audience who might be willing -- who might wish to add to this, although they haven't been sworn in; but if the answer I give is agreeable to them --

Q Maybe they can wave their hands indicating it is.

A Yes. I think we said on the air industry side, it's probably one of the most flexible. There is actually a surplus of aircraft in the world right now, and we don't really visualize that the figures we quoted you on the number of aircraft that would be required would present any problem to the air carriers concerned, and the only thing we said about the possibility of resupply be adversely affected was probably associated not so much with aircraft as with respect to labor, the availability of pilots. But the Canadian Transport Commission licence provides that the air carrier must provide the service that he is licenced to provide.

So this would prevent migration of aircraft from community resupply and to meet the logistics requirements of a pipeline, there's lots of aircraft available in the world.

Q All right now I can understand there being lots of aircraft available in the world, but can we break that down into suitable and unsuitable aircraft for this part of the world and this kind of transport? For example, you're going to be faced with a lot of short airstrips, you're

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going to be faced with a lot of poor weather, so therefore perhaps special navigational equipment, you're going to be faced with wanting to find efficient aircraft. You might prefer a Twin Otter to a Beechcraft but there might be lots of Beechcrafts around, for example.

A I think most of the small aircraft work would be done by Twin Otters. They're a STOL type of aircraft, as you know, and can operate on floats and all the rest of it. In the case of the larger aircraft, flying into the larger airstrips that I mentioned, are existing or planned the Boeing 737 or 727 aircraft that could be provided by P.W.A. For the heavy cargo, probably Hercules aircraft.

Q Are there lots of these aircraft as well as there being lots of surplus aircraft in the world?

A Well, in terms of the figures we quoted, yes.

MR. ROHR: (Inaudible) The existing fleet has a very high excess capacity. Their aircrafts must travel around the world to find business to pay their bills -- (inaudible) The Twin Otter aircraft could be used one for each camp, could be readily found Western Canada (inaudible).

MR. SCOTT: Will you give your name, or you will appear in the transcript as

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a voice?

MR. ROHR: Ray Rohr.

MR. SCOTT: Thanks very much.

MR. BAYLY: We have heard
from Foothills that they --

THE COMMISSIONER: Just to
make sure that we do this according to the rules,
do you solemnly affirm, sir, that everything you have
said in evidence and will say is the truth, the
whole truth, and nothing but the truth?

MR. ROHR: Yes.

THE COMMISSIONER: All right.
We have retroactively taken care of that.

MR. BAYLY: Q Now, we've
heard from Foothills that they plan to use helicopters
extensively. Does your statement that there are plenty
of aircraft apply to helicopters for the transportation
of men, particularly, and equipment from the various
camp and compressor station sites?

A Right.

WITNESS ROHR: (Inaudible)

Q Perhaps you could answer
the question again so that they can get it down onto
the transcript.

A The heavy helicopters
that may be required for the type of operation in
mind here would be not readily available, not as
readily available as the fixed wing aircraft in
Western Canada or in the remainder of Canada, therefore

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they may have to look farther throughout the North American continent for such aircraft.

Q Well, if we weren't going to take them from the rest of North America, assuming they were needed in other parts, what's the lead time in construction of helicopters?

A That I wouldn't be able to answer. I'm not sure what assembly lines are available for construction of helicopters by the various companies, and however, I would suggest that there would most likely be excess helicopters available in the North American market, and we have reciprocal agreements internationally where these aircraft can be moved back and forth and licencing can be taken care of.

Q Now, we've heard that there may be a shortage of pilots. Is that something that holds true for maintenance and ground crews in both fixed wing and helicopter operations?

A At the numbers we were talking of in our report, the additional people required could probably be very easily found or trained up to the standard required in very short order. When you start talking helicopters and areas that weren't covered in our report, I can't answer that.

Q Now, when you say they are available, these, I gather, are pilots that would be brought in and would be new to northern flying.

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Is that correct?

A Pilots who probably in many cases have northern experience but are not there today, the pilot population in the north is^a very transitory group and if you look around at the operators that are operating here today you'll find that they are people who probably weren't here last summer, but there is another group who were here last summer that are somewhere else employed, and in some cases right now there are a surplus of pilots. We've shut down our air transit operation between Montreal and Toronto that were flying Twin Otters. These were very sophisticated Twin Otters, they would fly in all-weather with very experienced pilots who were former airline people, were very experienced Air Force people, many of whom are still looking for jobs. In the pilot market there are always this type of people around who may not be flying a Twin Otter in the north right now, but sometime in their career or in their not-too-distant past have experience which can be equated to what would be involved.

There would be a requirement for the operator who is going to utilize people like this to provide them with some continuation training and we would be following -- monitoring very closely through our regulatory function, so that this in Alaska was found to be the toughest part. You could always find the airplanes and helicopters, but the pilots experienced in Alaskan operations were hard

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to come by. However, the companies found that by a training period of a few months you can bring most of these people up to the standards required.

Q And would you envisage that this would be training that would have to be done by the licencing officials, or are you thinking of companies training their own pilots in northern flying?

A There are training schools which specialize in advanced training -- Edmonton and Calgary -- which service the market in transport the north, to bring people up to airline/pilot standards and provide them with training in northern operations. All of the operators, as a requirement in their operating certificate, must have training facilities for initial training and continuation training of their crew. So that the framework is there. There would be some expansion required of the existing framework.

Q Now, while we're on pilots, but let's come back down to the ground, if there is an increase in barge and tug requirements are there enough river pilots to go around, or is that going to be a problem that involves some lead time?

WITNESS EVANS: Well, there are not enough river pilots, in quotations, to go around. What is envisaged is the ship's master and the first mate require specific training in order to

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Q All right. Is this one of the reasons that the dredging appears to be required? It was tied in Mr. Hagglund's evidence to delays at the five rapids that were shown on the map. Do you contemplate that without experienced masters these delays will be as long as you say or even with trained masters and pilots?

A The dredging would eliminate the need for this specialized type of training because the dredging would remove the twisting channel and replace it with a straight channel which was clearly marked.

In the respect of the dredging program the training itself was not really considered to be a significant factor whether -- in the decision whether or not you would dredge because first of all, we are talking in terms of about a two-year lead time which is a realistic figure and the other thing is we're talking of a cost in the order of something like 1½ or 2 million dollars for the training program which is a lot of money but is really very negligible when you talk about the cost of tows or the cost of the dredging program itself. So it really wasn't a significant factor although it was looked at.

Q But it is critical in terms of timing because we've just heard that the lead time for construction of the barges and tugs would be approximately a year or 18 months at the very

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longest depending on the route they took and the order. But we're looking at two years to train sufficient pilots if we can't use the present first mates and promote them.

A The lead time for the equipment itself is actually in about the same order as the lead time for the crew.

Q What I'm wondering is if you don't get your report in till 1977 on the environmental and social impacts of dredging and if you have the lead time of two years to train additional pilots and the lead time of one year to prepare barges, are we realistically looking at the ability to provide the added river equipment and personnel and restructuring of the rapids areas in time to meet the logistics plans of either Foothills or Arctic Gas?

WITNESS HAGGLUND: I think that's a decision that will have to be made following the final decisions by N.E.B. and government, perhaps parliament with regards to pipeline construction.

Q Now, I realize --

A All these things you just enumerated are part of the requirements in what you might call the preplanning stage before the pipeline construction actually starts and I'm sure I could name some others that the proponents will have to face up which includes financial planning. So that all these things might go hand in hand and the

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actual construction start might be two years, might be three years, I don't know. Because all these things have to be arranged for. There's no point in having pipe delivered to Hay River if you can't haul it down the river.

Q I understand that and I understand that you're not going to make the decision and neither am I but what I'm concerned with is your opinion as to whether in your own particular area these things can be done in time to meet the schedules projected or if it's your opinion that the start-up time for movement of supplies and stockpiling is premature given the list of things and there may be others that we have just gone through.

A Well, the only discussions we have had with the proponents would indicate that the lead time required -- well, let's talk about dredging first of all. I think dredging would be out entirely insofar as the time constraints are concerned unless the pipeline construction were delayed considerably. On the other hand the acquisition of new equipment -- buying trucks or buying barges need a certain amount of lead time and I think they could accomplish that along with the other things they have to do such as I said the financial planning, to arrange for how the thing is going to be financed.

Q Unless they're willing to wait for more time than they have at least

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scheduled, the dredging just doesn't fit into that time frame in your opinion?

A I think that's correct because our environmental impact study will not be completed until the end of 1977. That would have to be assessed and then a decision on dredging would have to be made and you would have to acquire dredges so that you would have another year delay and this puts the dredging program in support of pipeline construction probably off a number of years. You can just visualize how many. And if the pipeline doesn't go right away -- if it's delayed, then it could conceivably assist in pipeline construction.

MR. BAYLY: Thank you very much, gentlemen. Those are the questions I have.

MR. SCOTT: Mr. Sigler?

CROSS-EXAMINATION BY MR. SIGLER:

Q First of all, I'll let you know. I'm counsel for the Association of Municipalities which represents the larger settlements in the area.

First of all on page 50 of the study, it talks of the road network improvement plans. It states that the Federal Government is considering a new ten-year program based on the funding level of \$35 million for the first five years. The statement that the government is now considering the program. How long will it take for those considerations to be completed or what stage

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is that at?

WITNESS PREFONTAINE: Well, these are existing plans for road construction into the north and shows how the 35 million may be spent. Time for conservation for building these roads -- well, there is some as I said, plans done and they are submitted to the Treasury Board and may take two, three months, maybe more to have approval on these projects. So it all depends on the Treasury Board's attitude toward these funds -- how to use these funds.

Q So that implicit in this scheduling was that 1976 would be the first year of the five-year program so I take it that could be set back a year.

WITNESS HAWRYSZKO: I think there's one more thing we should add. The two or three months is the approval of the overall program and we then go back for approval of each individual project.

Q Right. But the program if it were approved, would start in 1977?

WITNESS PREFONTAINE: It will start in 1976 because the program ends in 1975.

WITNESS HAGGLUND: I might add there that even though I'm talking about another department other mine that the availability of these funds are subject to being approved by Parliament. If Parliament doesn't approve the funds the program

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doesn't go.

Q But the program has not yet been commenced in 1976, I take it?

WITNESS PREFONTAINE: No, that's correct.

Q So that even though the theory of the plan was a five-year or a ten-year plan starting in 1976, realistically you wouldn't expect any start on it until 1977 at the earliest?

A There are some projects that are presently ongoing like the Dempster Highway and the Carcross-Skagway Road so these projects might go on right at the start of the season of the summer season.

Q So depending on the timing of the approval from Treasury\Board and even Parliament, it still could be attained in that ten-year plan -- that ten-year plan scheduling could still be carried out even though we're now late in 1976?

A Yes, that's right.

Q And I take it that in recommending these priorities and plans, you feel that this program is a necessity in order that the road network will be sufficient to carry out the traffic that's projected by you in the study in the event of a pipeline?

A No, I must say that from these roads, it's not necessary that all these roads

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are going to be built. It all depends on the studies that are going to be -- well, the result of these studies. If they say, well, there is a priority for such and such a road instead of another one, well, the Department of Indian Affairs might go to build that road instead of the priority that was shown here because these are some possible plans for the future road construction program. It's not cast in stone. It's something that has been discussed and these dates that are being provided here are just to show that in the case of a pipeline logistics, they might be used or cannot be used. Again these dates are tentative year of completion given the time for doing the geotechnical survey and the alignment and other studies related to that and these may be put forward or even later than shown here.

Q So although it's not cast in stone, this is an overall plan which you feel could work to satisfy the needs that you feel will be there if there is pipeline construction?

A Well, again it could work as it is now but it is subject to approval and it may considerably change in the time-being.

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Q Who formulated these plans?

A Well, these were sort of an internal study done by the time that would be required to do a road and the sort of priority given to the road. Well, it was prepared by several divisions in the Department of Indian Affairs, Engineering Division, and the Roads and -- Division and Northern Program Planning Division.

Q I wonder if you could expand at all on what criterion were used in determining the priorities for the road program?

A I must say something, if I may add something. I'm not here to discuss about this road program. I just included it there to show some possible dates in the pipeline logistics and the roads program itself are other projects in our projection itself and may be discussed elsewhere, I think.

Q Well, is anybody on the panel able to discuss the criterion that were used in coming up with that roads program or is that somebody else in government?

A That's somebody else. That's part of the roads program itself, you see.

Q And who's in charge of that?

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A These are the Roads and

(?) Division of the Department of Indian
and Northern Affairs.

Q Right. So, it's just
been included in here more for information than for--

A That's for information
specifically and not for any consideration further
than that because these dates were put in there as
tentative dates in case that the pipeline logistics
plans were let's say using the Liard Highway and as
shown here, it's presented in 19--should be terminated
in 1983 and '84 but if required, it may be forward
or put back later on.

Q Right. Well, then I
won't ask you people any more questions on the actual
program itself other than a general one about what
consideration has been given as to the source of the
gravel requirements that would be there for either
constructing new roads or for the increased maintenance
work on the roads once there was--once the construction
period was under way. I think it's been indicated in
the evidence this morning that there be a need for
greater maintenance work on the roads and as well as
for expansion of the road system. Are you satisfied
as to there being enough gravel to meet their
requirements of the roads program as well as say of
the pipeline companies and the point I'm trying to
get at from my angle is that the municipalities have
taken a position that they should have first call on
the gravel requirements for their own purposes within

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the community and the immediate area of the larger communities and I think the smaller communities feel the same way. Do you see any conflict? Is there enough gravel to go around?

WITNESS HAWRYSZKO: I can't give you a specific answer but I can tell you that there has been a gravel survey carried out by the Department of Indian and Northern Affairs.

Q Is there a report to--

A There are reports, yes.

MR. SCOTT: I think that gravel survey, Mr. Sigler, is already an exhibit.

MR. SIGLER:
One last question with

regards to the road traffic. It was also mentioned that there'd be a large number of heavier truck traffic on the road. Do you think that there'll be a sufficient capacity of the roads to carry the local traffic, both the smaller trucking firms that are existent in the northern communities as well as just passenger vehicles or pleasure vehicles that are normally related to them? Will the roads be safe for the people living in the communities to use as they're using them today?

WITNESS PREFONTAINE: Well, this amount of traffic will influence very much the non-pipeline related traffic because well I'm talking about--as I said thirty-four full cycle trucks. The only problem that might appear as Mr. Hagglund mentioned, is the dust problem. That may be accelerated

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and some solutions have to be found in that respect.

Q And the dust control problem would be one of treatments by some means, or pavement or something that might control the dust.

A That depends on what operation you're speaking. The best way is, of course, paving but that's a lot of--that's quite expensive and the second solution is the application of calcium chloride but that again is expensive too. That's almost double the maintenance cost per year and the third solution is to increase the number of passing zones.

Q Now, I take it, somewhere in the Ministry there's a pretty basic philosophy these days. One of user pay for facilities and I just wonder if that type of policy could be related to highways and more specifically if larger roads-- if more degree of road treatment is needed in terms of making it safe for the public to use caused by the traffic requirements for heavier vehicles used by pipeline companies that are not being consistent with the philosophy of the Department to make the pipeline companies bear the extra cost of maintenance of these highways.

WITNESS HAWRYSZKO: There's is a statement in our brief which shows that the revenue currently received from license fees and from petroleum taxes almost matches exactly the maintenance cost of the roads.

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Q And as a general principle, the added maintenance cost being borne by the user causing those maintenance costs would be consistent with the philosophy in other areas of public transport facilities these days.

Now, turning then to the area of the water traffic, and my major concern in this area is one of community resupply. It's been a concern that's been voiced in the Inquiry by the different community leaders. I notice, first of all, that in the projection of the community resupply traffic over the conception years, the figure of nine percent seems to be used as the amount of annual increase per community resupply.

I wonder if you could comment more on why the nine percent figure was used?

WITNESS EVANS: Well, I think perhaps I can. I guess foretelling the future is always very hazardous and so the attitude that we have taken was to go back over cargo growth on the river annually over a period of, I guess, thirty years or almost thirty years and in looking at the cargoes over that period, the average growth, while the actual rate has been up and down from year to year, the average growth rate has been almost nine percent, up until 1973, when it fell off.

The reason why it fell off is, of course, somewhat conjectural. It's possibly as a consequence of the uncertainty of the future at the

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moment and so what we have done is we said okay, right
now the traffic is fairly stable and constant but
if there were to be a decision in favor of a pipeline,
then the growth rate that we have seen previously
would resume.

Now, that's just an assumption.
It could be more but we don't really know.

Q So, you don't necessarily
disagree with me that the years of pipeline construction
may well not be average years for growth?

A No, but we have no
better information.

Q And it's been suggested
in evidence say by the Housing Commission, talking
about their needs and the strain that that might put
on the water system in terms of supply and modular
housing or package housing to northern communities
and also by--I know by some of the municipal witnesses
saying the need for community resupply in the sense
of building the facilities that are needed within
the communities to expand the municipal infrastructure,
that these may well not be average years; to the
contrary that there'll be a great need of expansion
in terms of housing needs and other needs for the
communities that will create its own demand on the
transportation system and their concern is that these
added demands have not been taken into account in the
planning of the total demand that will be placed on the
system and in looking at the study, it seems to me that

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the main added demand factor that's been used is the one only of the pipeline companies and the hydrocarbon generally as far as gas plants go in offshore drilling, that there's been no large increases planned into it for community resupply. So, I'm correct in my reading of the study?

A Yes, that's right. We've just assumed that the resupply would continue as it has.

Q So, if there's more than the nine percent, which is the average from past years, then there'd be added demand for the services on the river.

A That's correct. The point is, how do you quantify that?

Q Right. You don't have a crystal ball either, I guess. Then we get into the area then of the priorities that might be placed on the facilities that are there in place on the river and we've stated that under the public carrier policy, that no one commodity or no one customer can be given priority over another. Is that correct in my understanding of the policy behind the--

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2 A One of the basic tenets
3 of common carrier operation is that there shall be no
4 discrimination.

5 Q Now, I suggest that to
6 say that, that's talking very theoretically, because
7 say Canadian Arctic Gas is letting out large contracts
8 the carrying has to be done, in fact they're going
9 to be given priority by the carriers, just because of
10 the amount of work they're going to require to be done,
11 as opposed to the person who has a small order to make
12 in a community,

13 A I'm sorry, I don't know
14 that -- at least I have no reason to believe that the
15 pipeline traffic would be given priority.

16 Q If it is in fact given
17 priority, does the C.T.C. have regulatory authority
18 to enforce the equality or non-discriminatory provisions
19 against the carrier that might be giving it priority?

20 WITNESS HAAGLUND:

A Yes, it does.

21 Q What does that power
22 include?

23 A Well, it would be
24 involved in after the fact, so that the thing you're
25 describing could occur and since it's seasonal in
26 nature, you could have a problem; but you know,
27 there would have to be complaints lodged and the
28 C.T.C. would investigate and take whatever action they
29 have under their Act to correct the situation. But
30 it may well be too late. I think what you're describing

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is something that could occur, and I think I said my summation that we recognize this as a problem but we don't have any solution for it at the moment.

Q Do you have any -- does the C.T.C. have any enforcement people in the field, or would it have any people on hand locally to receive complaints or to investigate complaints?

A It could have, yes.

Q Is it planned to have any at this point?

A Not at the moment. All plans of that nature are similar to all plans that would follow the N.E.B. decision. There would be a real crisis of decisions having to be made to solve all kinds of problems that we know will occur.

Q Then you stated if it became a serious problem, the fact that legislation might then have to be considered to establish some sorts of priorities.

A I said that it was possible; I didn't visualize what the legislation would be but you can never rule out legislation to cover anything.

Q But that legislation would be necessary in order to give any kinds of priorities to community resupply.

A That's correct, yes.

Q Then you made the suggestion of the possibility of some sort of an

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agency that could consider the resupply to the communities.

A Yes, I think I was just dreaming there in the sense that on the Alaska experience it had a single agency, a single regulatory -- not a single one, but they had various regulatory agencies to control the quality of construction and so on, and you could transpose the same thing, whether they did or not I don't know, to transportation or any other field, or you could have some agency created to make sure that everybody was treated fairly, or that in fact some priority were given to resupply traffic because it was there first

Q You wouldn't disagree if with me if I suggested that/one of the functions of such an agency was to consider community resupply people from the community should be involved in that agency.

A I wouldn't disagree with you, no.

Q Now, turning then to the subject of Axe Point, I think it was mentioned in the evidence that Axe Point could deprive Fort Simpson and Hay River of benefits. What kind of benefits could these two communities be deprived of with Axe Point becoming operational?

WITNESS HAWRYSZKO: This statement is a general one and wasn't -- that topic wasn't considered in detail in the study; but the type of

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benefits we were thinking of was simply the economic benefits of increased job activity in the community, things of that nature.

Q I wonder if in the considerations and the planning of Axe Point, what is seen by the Department of Transport or by government as the long-term role of Axe Point, say after the construction of the pipeline is completed? What's the ongoing role of Axe Point as opposed to say Hay River and Simpson?

A Well, the government has no long-term plans for Axe Point.

Q Are you familiar, from having worked on this study, what the long-term plans for Axe Point might be by the, say, NTCL?

A No, we have not been given any information on NTCL's --

THE COMMISSIONER: As far as we know, neither the government nor NTCL have any long-term plans for Axe Point.

A That's correct, sir.

MR. SIGLER: Q I wonder if in trying to estimate the amount of traffic, you've included any needs that might be there or demands that would be put on the transportation system of gas feeder lines were constructed to various communities?

A Yes, we did consider that aspect. About half the petroleum products currently used are used for the type of services

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which could be provided by community gas, that is electrical generation and space heating. The effect of this would be to reduce the petroleum products coming through Hay River considerably. This situation is somewhat complicated by Norman Wells, but if you assume that all Norman Wells production is used first, you wind up with virtually no petroleum products going through Hay River in the early years, and I believe it's not until some ten years after that Hay River again becomes a port for petroleum supplies, except for specialized commodities which couldn't be produced in Norman Wells. No. 1 gas, for instance.

Q But would it be fair to say that if there were gas feeder lines that once they went into operation at the -- there would be an increased capacity on the Mackenzie from Hay River to carry other types of goods because of the decrease in the oil products that would be barged?

A I'm sorry, the question isn't that simple. The petroleum products are carried below deck, and are used to bring barges to an optimum marine operations level. Now, the effect might be, for instance, that you would be loading more heavier deck cargo and then you wouldn't get any effect. You'd carry simply more cement instead of petroleum products. On the other hand, if you didn't have a demand for cement, you would wind up with a problem on the deck.

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Q So it sounds like the impact of that could be the subject of another study in itself.

A Perhaps a rephrasing of the question where the answer might be more appropriate.

Q But at any rate in these projections of community resupply, for example, you've continued -- you haven't made any allowance for dropoff in say oil supply because of natural gas going onstream to the local communities?

A Again, I'm sorry, in what context are you asking that question?

Q Well, in terms of the community resupply figures that are shown for the water transportation system.

A I think that's right, we did not include the possibility of replacement of petroleum products by natural gas.

WITNESS EVANS: No, that's quite correct. It's a scenario which is a continuation of what it is now, and certainly if this gas distribution was implemented, it would drastically reduce the oil cargos on the river.

Q And in terms of the equipment that would be needed to, say, pipe, to build feeder lines and equipment needed to establish a distribution system in these communities, that hasn't been included in the resupply figures?

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A The equipment for
building the gas distribution?

Q Gas distribution --

A No, it has not

Q -- into the communities.

A No, the gas distribution
system is not included.

Q One other question that
is not directly related to the study, but I can't
resisting when we have Ministry of Transport people
around, because one concern of the municipalities
has been with regards to the location of the planning
of M.O.T. facilities within the municipalities, and
the degree of input that the local people have had
into those decisions. I wonder what plans may be
-- that the Ministry may have to involve the local
people more in the planning and location of their
facilities within their settlements in the Mackenzie?

WITNESS HAAGLUND: I started

--

WITNESS ROHR: What type of
facilities? Do you have any specific situations in
mind?

Q Well, say airport
facilities, well, any types of facilities that are
going to be needed say, to cope with this increased
traffic.

A You said initially that
the communities were concerned that they had not had

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3 sufficient input into community planning. Are there
4 any facilities now? Which ones did you not have
5 sufficient input into?

6 Q Well, perhaps rather than
7 deal with the past, what are the plans for the future?
8 I think that's more the concern, in fairness then.
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A The reason I asked the question is that I feel that in the current situation that the communities have good input into planning of facilities. One facility that discussion was underway on planning of was the Hay River Airport's use in a total Hay River industrial development study. In that situation, Transport has two people. One to provide an overall view and one specifically the air situation.

Studies were conducted and presented to the Hay River Industrial Development Steering Committee and good rapport was had. Now, we plan to continue as we are doing. Now, if there's something that you have, where you say we haven't; if you can point something out, we'll try and fix it up.

Q No, it's more of a concern by the councils that they will be involved in the future in expanding situations because of their lack of control over zoning or actual jurisdiction over the Federal facilities within the community and wanting that input in terms of involvement into their own community general plan, they feel they require a continuing input in the future.

A The one situation that was mentioned in Mr. Hagglund's presentation was that the community airports, the B & C community airports that we call for the small community airports; what our process is now is that we prepare a technical study

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and a draft master plan which we present to the community. Then then, are given an opportunity to review it and invite us back to a discussion. We just had one in the last couple of weeks at Fort Good Hope where we, according to the policy, Fort Good Hope is a class C airport which gives it a three thousand foot runway with lighting and meteorological facility and so forth.

We drafted a plan as to where we thought this would be a reasonable place to develop an airport. The community has given us some input. We are doing some more review and will continue until we agree that an airport should be built in a certain location or should not be built.

Q So, what you're saying then is you're in agreement with involving the local communities?

A By all means. As you mentioned, the jurisdictional problem is very great. Off of our airport, the community then has jurisdiction and we run into problems continually with housing being built in noise sensitive areas, not particularly in the Northwest Territories but in other parts of Canada and we must co-operate very closely with the towns to develop the facilities which meet their needs. That's what they're there for and also the community is able to live with them and to protect them for the long-term use.

Q I didn't mean to express

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the criticism; only a fear that the councils have.

A It's by all means.

It's the only way it can work.

Q You're giving that
assurance to them?

A Oh, yes.

MR. SIGLER: Those are all
the questions I have, sir.

MR. SCOTT: Mr. MacLachlan?

MR. MACLACHLAN: I have no
questions.

MR. SCOTT: Mr. Ziskrout?

MR. ZISKROUT: No questions.

RE-EXAMINATION BY MR. SCOTT:

Q Could I ask a couple of
questions about railways. First of all, are you able
to tell me what the additional manpower requirements
for the expanded facilities envisaged at Enterprise
are?

WITNESS HAWRYSZKO: I believe
it's about a hundred people.

Q Well, what additional
facilities, if any, are going to be necessary at Hay
River in order to transfer goods and materials from
railway to the barges?

A It somewhat depends on
the type of goods but the crane there now is sufficient
to handle pipe. Now, whether they have sufficient
crane capacity to handle the amount of pipe envisaged
going through Hay River, I don't know. The other area

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that I would be uncertain about is whether sufficient capacity to handle the amount of bulk fuel that would be required by the pipeline.

Q I take it that as a result of that answer, you're not able to predict the additional manpower requirements or the additional jobs that may be created at Hay River, even in a general way as a result of that activity?

A Our report gives the numbers that the proponents indicated would be based at Hay River for their operations, but beyond that, I don't have any information.

Q Well, have the proponents provided you with information as to manpower other than their own that may be required?

A No, they've not.

Q No. And you have no knowledge of that at the present time?

A No, I really couldn't give you a detailed answer on that. I could tell you the train crew is two and if you get an extra train a day, you get two more people coming in but--

Q I'm not sure that I understand. You may have answered this either in your report or in your evidence today, but as far as railways are concerned, is there a mechanism that can protect community resupply, particularly in the event that there is an emergency that leads the applicants to move to rail transportation? Is there some mechanism or agency of government in existence that can

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1 establish priorities with respect to rail transport?

2 A I don't believe so.

3 Q I take it, therefore,
4 it follows that there is presently no regulation which
5 can be utilized to establish these priorities in the
6 event that the pipeline companies go to rail supply
7 routinely or in an emergency situation?

8 A I'm not aware of any.

9 Q For what it's worth and
10 recognizing that you don't contemplate any difficulty
11 with air transportation, but for what it's worth, is
12 there in existence any mechanism or regulation that
13 can assure priority for community transportation or
14 community resupply as far as airways are concerned or
15 are you caught by the general common carrier principle
16 that everybody must be given priority?

17 WITNESS ROHR: Yes.

18 Q Are bulk rates on the
19 airlines different from ordinary community rates?

20 A Pacific Western in their
21 operations have a unit rate per pound package and a
22 rate for their container, if you supply a packaged
23 container, and then also there's another rate for
24 chartering the whole aircraft. So, your freight is
25 moving on a scheduled aircraft. You can either send
26 it as package freight or in a container. A lot of the
27 community resupply is done on the container rate.

28 If you're buying groceries,
29 for your store, most of it is moved on the container
30 rate.

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Q But I take it that the charter rate is the most advantageous and then the container rate. Is that correct?

A Yes. You're filling the whole airplane. The aircraft is moving with a full--

Q So, in terms of looking out for community resupply and perhaps this is true of rail as well, we must have regard for the fact that the very large supplier will be one that notwithstanding the common carrier principle, is more attractive to the carrier?

A The carrier has to maintain his schedule, so that if he is moving packaged freight on a scheduled basis, he will load his aircraft up to maximum weight with the packaged freight.

If someone else wishes to use a full airplane load, the airline company can provide an aircraft if it has one that is not used on a scheduled service.

WITNESS HAWRYSZKO: With respect to Great Slave Lake Railway, ~~they~~ only carry traffic in carload lots.

Q I see. Well now, with respect to air transport, you've indicated that there will be additional hanger and storage facilities required at Inuvik, Norman Wells and Fort Simpson. Is it possible at this stage to estimate the manpower that will be required to develop those and to maintain them, the additional manpower, if any?

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WITNESS ROHR: Very difficult.

It depends on the type of construction, the size.

This was a general statement that extra facilities

were required taking into consideration that the

hangers that are there now are owned by private

operators and if a new operator came in, such as a

pipeline company operating their own aircraft on a

long-term basis, they were going to use it for

maintenance purposes, they'd want a place to store

it and how many people that take to build a hanger

depends entirely upon the construction method and the

type, the belt type. I'd be just guessing if I tried

to put a number to it. Long-term maintenance, very

few people are required to maintain the hangers.

Usually the people involved in doing aircraft maintenance

and so forth do this as an extra duty.

Q Yes. Well now, when you gauged the seven additional passengers per P. W. A. flight, I take it that you base that on the figures that were provided by the applicant in their applications?

A Yes, that's true.

Q And those figures, I take it, have account only of movement in and out of personnel for weeks off and that sort of thing. They have no account, for example, of quits, persons who decide to leave their job permanently and therefore, move out of the Territory, not as part of a regular turnover but permanently.

A Yes, that's true. I think

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there was one number there for a basis of a turnover of one job--one person for each job each year, was it not, Mr. Hagglund?

WITNESS HAGGLUND: That's correct, yes.

Q And I take it that you constantly didn't put into these figures anything about the experience in Alaska where there has apparently been a very high turnover rate in the sense of people quitting and new people being hired.

WITNESS EVANS: Not more than one person per job.

Q Yes. I take it also that you didn't and weren't able, I don't make any criticism of this, but that you didn't take account of any air transportation on P. W. A. that might be engendured by in-migration not directly related to the pipeline construction, but related to secondary industrial or economic activity?

A That's correct, yes.

Q How were you able to deal with surge periods of use apart from Christmas or were you able to deal with that?

WITNESS ROHR: We dealt with it by giving the numbers that the Arctic Gas people gave us and simply distributing that over the two months period in which they would be moved up to the job site and again, for the same situation in the spring, when they'd be moving out. We were told that that is a two month period and the total number of

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employees is eight thousand and so you simply, by
arithmetic, can calculate the sort of numbers per day.

Q I take it you simply were obliged to accept the figures that Arctic Gas gave you with respect to this in making your calculations.

WITNESS EVANS:

A We had to take the data in respect to the number of people employed because there's no other way to find out other than what they intend to use, and also their plans for moving people in for a two-month period. Those are their plans.

Q Yes, but their plans, for example, contemplate moving people out over two months at the end of the construction season. Do I have that right?

A That's my understanding.

Q Yes. You weren't able, I take it, to evaluate or make any assessment of what would happen in the event that they were behind their construction schedule in that construction year and therefore decided to move their people out, not over two months but let's say over three weeks.

A No, we didn't take that into account.

Q On the subject of roads, are you able to estimate in any fashion the manpower requirements that would be occasioned by terminal requirements or control vehicles?

WITNESS HAWRYSZKO: I believe that number is in our brief.

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Q Well, if it is in your brief I won't trouble you to hunt it up, as long as it's there. Now, apart from carriage of pipe, which is a separate subject and requires a different kind of trucking, as I understand your evidence, were you able to make any assessment of the extent to which the northern trucking industry would be or might be diverted to the applicant's use for other than pipeline carriage?

WITNESS PREFONTAINE: Well, it's difficult to assess right now since we don't know the exact requirements. While we have some tonnages for cement, construction materials and so on, we don't know whether or not these materials are going to be shipped by a contract carrier or from a local carrier or northern carrier.

Q Yes. I take it that the volumes of material that could be carried by the current trucking industry -- let me put the question this way -- that the volumes of material that the local trucking industry is capable of carrying that Arctic Gas will need, are very large.

A You mean the northern carrier?

Q Yes.

A Well, generally speaking they are not that large, since the average units per owner is one to two units.

Q I am sorry, I haven't

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made myself clear. I understand that. What I'm suggesting to you is that Arctic Gas will have to bring into the Territories a large volume of supply that is capable of being carried by the kind of trucking industry that exists in the Northwest Territories.

A Except pipe.

Q Except pipe.

A The northern industry is able to.

Q Yes, and if Arctic Gas goes to the commercial market in the Northwest Territories to obtain its trucking for any portion of that supply, it will be a serious drain on the local trucking industry.

A That's correct.

Q Is there any mechanism available, any mechanism or regulation that is available to ensure that the local trucking industry is obliged to give preference to local existing needs in the face of pipeline requirements?

A At the moment there is no regulation on that aspect.

Q At the moment, I take it, it will simply be apart from the necessity for an appropriate commercial vehicle licence, it will simply be a free market situation.

A It will be a free market situation but I must say that the Northwest Territories

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Government can do within its regulation some recommendation about the share of the market to limit in other words the number of certificates.

Q I take it they do that by appropriate amendment to the licencing regulations so that for example certain truckers could be restricted or prohibited from carrying pipeline supplies.

A That's right.

Q That regulation may not be very population, I presume. Now, is there presently any mechanism to ensure that for example at the Fort Liard ferry that community -- that is non-pipeline needs -- have priority?

A Well, actually there is no mechanism. Any passenger cars and trucks have the right to take the ferry whenever they arrive there, but in order to avoid quequing problems, some recommendations might be made or scheduling to the pipeline company to try as much as possible to adjust their arrival times in an off-peak period of the ferry crossing.

Q I take it that it's apparent from your studies of the trucking required that that ferry is going to be severely taxed.

A yes, that's correct.

Q And if no regulation is in effect, there is going to be quequing that's going to make Wasaga Beach look like nothing.

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A Well, these calculations were made in order to show the impact that the amount of tons that might be shipped to Fort Simpson from Enterprise might have on the ferry crossing, but this is just as an example because I was told by the company, Arctic Gas Company, as far as Fort Simpson is concerned that they might ship most of their materials in wintertime to avoid problems of ferry crossing.

Q Well now, something on water transportation. Do I understand that the barges are common carriers and therefore have common rates that are available to individuals as well as pipeline companies?

WITNESS LEBLANC: Yes, there are different types of carriage, there is common carriage and then there is specialized carriage, and in order to -- any applicant for a licence once he's granted a licence for common carriage is required to file a tariff with the Canadian Transport Commission, a standard rate tariff. He may file other tariffs for special commodities. He can also enter into an agreement under Part 4 of the Transport Act for special shipments, on agreed charges between the carrier and the shipper.

Q Well, what is the practical result of that? Am I, for example, as a person who requires a shipment of -- let's say I as a furniture store owner in Inuvik require some

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furniture to be barged down the river or up the river to -- no, down the river -- to supply my store. Am I going to be competing on the same rate structure with Arctic Gas' non-pipeline supplies?

A Well, that would be an entirely different item under the tariff.

Q Well, I take it that the item, the tariff item is fixed with respect to the nature of goods that are carried.

A Right.

Q And I take it that furniture may cost less or be at a lower tariff rate than some Arctic Gas requirements, but at a higher tariff rate than others.

A That is possible.

Q Yes. Is there any mechanism now in existence that can give preference to community resupply?

A Other than possibly complaints, if the complaints are filed with the Commission that there is unjust discrimination --

Q No, but I take it, Mrs. LeBlanc, that the complaint mechanism simply permits you to say that the transporter has not been behaving like a common carrier, that is has not been treating you equally with others. Have I got that right?

A Yes.

Q There is no mechanism that requires the transporter to give a preference to

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community resupply?

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A Not to my knowledge.
that

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Q And / a regulation or

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some appropriate remedial legislation would be

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required to ensure that.

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A That is correct.

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Q Do I understand that the

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rates that are established are fundamentally, while

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they are approved by the Commission, fundamentally

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respond to the free market forces?

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A I would say they do.

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Q Yes, so that free

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market forces, when pipeline movement is involved up

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and down the river, will affect the rates for

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community resupply as well.

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Hagglund, Hawryszko
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A It could possibly.

Q Have we any way of assessing whether that is going to lead to an escalation; that is, an escalation beyond normal cost for community re-supply costs?

A I'm sure the committee will take that into consideration.

Q Is that likely to occur or is it possible to say?

A I'm sorry. It's not possible to say.

Q In other words, what will happen is that the transporter will establish a rate for community re-supply items as he does now and will have to justify that to the Commission in terms of his cost for that kind of item?

A Should there be any complaint filed, yes, regarding discrimination.

Q Are the rates approved automatically even when there isn't a complaint filed?

A The standard rate is approved by the Commission. All other, they may, file other tariffs and they do not require the approval of the Commission.

Q I take it also that the introduction of any quota system for community re-supply would require new regulations or perhaps new legislation?

A At present there is no regulation to cover that situation.

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Q Perhaps this was covered in your evidence but do I understand the proposition to be this: That if Arctic Gas or Foothills were to operate their own barge transportation system that would deprive the existing carriers of a relatively lucrative items to transport and that that could have effect on their tariff for community re-supply.

A Under the present legislation -- under the Transport Act -- the carrier is licenced for hire or reward. If a pipeline company wished to transport its own goods on its own ships or bare^{boat} charters or vessels for such transport of goods, it doesn't come under any jurisdiction of the Canadian Transport Commission.

Q And would be as far as you know, perfectly free to do so?

A That's right.

Q All right, now what I'm asking you is if it did that, what would the effect be on the cost of transporting goods that the communities in the Territories now need?

A I'm sorry, I can't answer that.

Q Well, it's perfectly obvious, isn't it, first of all, that it would remove from the common carriers a substantial and reasonably lucrative volume of work?

A Yes, very logical, yes.

Q Isn't it a fair inference

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from that that deprived of that volume of work at a
lucrative rate the cost for other supply would
probably go up? I don't ask you to predict in
certainty but isn't that a likelihood?

A That is a likelihood.

Q Yes. Have any discussions
of which you are aware as to at the conclusion of
construction who will own the Axe Point facilities?

WITNESS HAWRYSZKO: I'm
not aware of any discussions on that matter.

Q I take it that the
Applicant's proposal however is that they should --
that those facilities should be built by and owned
by the Applicant.

A I'm sorry I have no
information on that matter.

WITNESS HAGGLUND: I could
add something there. I think that there are
discussions -- this is strictly surmise -- N.T.C.L.
has leases on the most favourable positions
at Axe Point, as far as I know. And they would be
engaged in discussions with the proponents and
probably work out some sort of an agreement. But I
would venture to say that the new facilities would be
funded entirely by the proponents.

Q So that while the
proponents might build the facilities at Axe Point,
because N.T.C.L. has the leases, N.T.C.L. is in a
pretty good position at the end of construction to get
them.

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A It could well be, yes..

Q And that if they get them, I presume they're likely to continue to use them as it would be imprudent to get them without using them?

A Not necessarily.

Q What would they do with them?

A Well, I presume that they in the overall cost of the construction of a pipeline, some assumption would have to be made by the pipeline proponents that he has to amortize over the three or four year period as to certain facilities.

He might do the same with those and they would be written off completely.

Q The reason I ask these questions is that the Community of Hay River, as you know, is concerned about the establishment of Axe Point and their concern, I take it, relates not only to the construction transportation -- it will go through there, but what will happen after construction is over when a useful facility falls into the hands of N.T.C.L. for its general trade?

WITNESS HAWRYSZKO: Could I give you some discussion on that matter?

Q Yes.

A The work we did indicates that it would be cheaper to move through Axe Point rather than Hay River for all commodities. The

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difference for commodities that come into Hay River by rail is pretty small but there is a significant difference for commodities that enter by truck and I would say that that type of cargo would be readily susceptible to capture by a terminal at Axe Point.

Similarly, the stuff that moves out of Fort Simpson now would be readily susceptible to capture because instead of trucking all the way to Simpson, you would only truck to Axe Point and still gain the seasonal advantages that now fall to Simpson.

The other side of the coin, of course, is the usefulness of the Axe Point facility depends on road connections between the Mackenzie Highway and the Axe Point terminal and as far as I know, nobody has leases for a road right-of-way. It would seem to me that if you wanted to control the future use of the Axe Point terminal the way to go about it would be to control the road access.

Q All right, in other words the road access gives government a handle on controlling the situation?

A Yes, sir.

Q But I take it that if the Axe Point facilities fell into the hands of N.T.C.L. at the conclusion of construction economics alone would dictate that they use that facility rather than Simpson or Hay River?

Hagglund, Hawryszko
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A With one caveat,
that's correct, and that is that you would have to
look at the transfer equipment that would be left
at Axe Point. If you didn't have the right kind of
forklifts or the right type of warehousing, then the
economic advantages might fall to Hay River but all
things being equal, I would agree that there would
be an economic advantage to Axe Point certainly for
truck traffic with truck originated movement.

Q So that leaving your
caveat aside and having regard only for economic
questions as opposed to social questions, the
development of Axe Point on leases that are owned by
N.T.C.L. poses a threat to the economic life , the
shipping economic life of Simpson and Hay River
beyond the pipeline period?

A It poses a threat to
the shipping aspects of Hay River, yes. Perhaps I
could add -- that advantage that Axe Point has is
negated if the channel is dredged. One of the more
costly aspects of marine transport on the river is
crossing the long and difficult Providence Rapids.

Q So what you're saying
is that the -- if I understand it -- is that the
advantages of Axe Point, the economic advantages of
Axe Point over the longterm disappear if dredging is
done?

A Yes, sir.

Q And I take it that if

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1 looked at in that fashion, if dredging were done
2 the economic advantage would in a certain sense be
3 with Hay River and Simpson because the facilities
4 exist there?

5 A I have to think about
6 Simpson but certainly for Hay River.

7 Q Now, it's apparent that
8 additions to the system and dredging and so on will
9 involve substantial capital cost if they proceed. Is
10 there any mechanism for fixing users with all or any
11 part of these capital costs?

12 WITNESS EVANS: Well, I
13 think it depends upon, I suppose, who the users are
14 that you're referring to. If the users are the
15 pipeline proponents, I think it automatically falls
16 to them by the simple refusal of anyone else to
17 pay for it.
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Q What I'm suggesting is that in order to achieve that result, a term or condition has to be imposed on their right to proceed with the pipeline project. "We won't do these things unless you pay for them."

A I'm not sure I quite understand. If you take, for example, the increases required in fleet capacity to handle pipeline traffic, there is no one else other than the proponent who is willing to buy these. So the user cost as far as the capital cost of the fleet is concerned for pipeline falls to the proponent.

Q All right, what about dredging?

WITNESS HAAGLUND:

A Maybe I could add something there, Derek. I think the intention of at least the present Government of Canada in the way of replacement was established by Mr. Schuler's statement with regard to the construction of the Mackenzie Valley Highway, which was prior to the 1972 election when he said that:

"To the extent that the highway will contribute to the -- to facilitate the construction of any pipeline, the pipeline, the successful pipeline proponent will be expected to contribute to its cost."

I'm sure the same principle would be applied to dredging. Even if we dredge the river for long-term growth, and, there were no pipeline say built for ten years or

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2 eight years or six years, and we have ample time to
3 complete the dredging, at such time as the pipeline
4 were built I'm sure that the government would, because
5 of transportation cost savings that the proponents
6 will enjoy, I am sure that the government will step
7 in to attempt to recover all or a good portion of
8 the dredging costs.

9 Q But that will be some-
10 thing that will have to be dealt with at the time the
11 permit to proceed with the pipeline is given. It's not
12 something that can be done under existing --

13 A No.

14 Q -- regulation.

15 A No. I would think, in
16 fact we've had discussions with river operators, the
17 pipeline proponents, when they look at our dredging
18 started they're quite convinced that there would be
19 large transportation cost savings. But how you invest
20 in advance, government can't do it in support of
21 the pipeline because it would be obviously to compro-
22 mise the N.E.B. decision, and proponents wouldn't
23 probably do it because they wouldn't know if they were
24 going to win the decision or not. So the pre-investment
25 problem is the horns of a dilemma and the only way
26 you could ever dredge the river in advance would be
27 in support of long-term growth, I think.

28 Q I take it that in the
29 long run, the way to recover these capital costs is
30 by imposing a tariff on users, and is not by permitting

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an alteration in the rate structure.

A Well, quite obviously there would be some compromise responsible because all equipment, all the users now, all the operators would enjoy an increased productivity, as I stated, of 45%. So their costs of delivering, their unit costs would go down dramatically, and therefore some of the savings could be transferred to pay for the cost of dredging.

Q No, but I take it that if I'm a person who requires community resupply at Inuvik, dredging is only over the very long-run going to offer advantages to me. I don't need dredging now to get my supplies.

A No, that's right.

Q And therefore allowing the costs to be reflected in the rates is going to provide an inequitable or is going to impose an inequitable burden if you have regard to the fact that dredging or the creation of other facilities will be done for one supplier primarily, rather than another.

WITNESS EVANS:

A Perhaps I could answer that. I think you're assuming that the rates are inflexible downward. The point that Mr. Haaglund was trying to make previously was that if dredging is performed, the amount of cargo that a barge can carry will be increased significantly and the amount of time it requires to move that barge will be reduced significantly, and as a consequence, the cost of

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moving that cargo, the same cargo, will be reduced and there is, if you disregard the fact that we have inflation, if we had a constant stable situation you could actually expect that the costs and hence the rates would be reduced. The ball park estimate -- and it's only a ball park -- is something in the order of 20%.

Q And do you suggest that that provides an advantage to the community resupplier at Inuvik that justifies burdening him with part of the cost of these capital improvements?

A Yes, I do, because I'm suggesting his advantage would be greater than what costs he would be charged.

Q Well, bearing in mind what he's paying now, when the system is adequate or more than adequate for his purposes, are you suggesting that a higher rate to pay for these improvements in the short-term is in his interest?

A I'm not suggesting that the rate would be increased to start with to pay for the improvements because there is, as I said before, a cost saving which could be transferred to the consumer through reduced rates, and there is a second component which is an increase to pay for the dredging. But that doesn't necessarily say that this increase to pay for the dredging has to be imposed over say five years. It could be imposed over 15 years or 20 years.

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Q Now, what I'm trying to get you to say and perhaps I'm not succeeding is that the surcharge in the rate or the capital cost of the dredging should not be applied against the rate that it should be collected from users in some other fashion.

A And what other fashion would you suggest?

Q By a levy on the principal user for whom the dredging is primarily performed. Now, you all know who that is.

WITNESS HAAGLUND

A I think I know what you're driving at. I think I would agree with you. It's the same type of thing that happens with transportation in support of social development or economic development. In the case of transportation in support of economic development there is normally a fair amount of benefit to gain for special development. If the dredging, if it were possible to complete it before pipeline construction, and the entire cost of the dredging were to be levied on the pipeline proponent, then the advantages of that new piece of infrastructure should accrue to the residents and in fact on a resupply their rates should go way down, and stay down permanently because the dredging has already been paid for.

Q Yes.

A Really, who paid for it is probably the guy who uses the gas in Toronto or

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somewhere else.

Q All right, but what I'm asking you is do you see the inequity in trying to collect that money through the rate structure?

A For resupply?

Q Yes.

A Well, I've just described an instance where there would be no -- dredging would have no effect at all on the rate structure; in fact they would benefit from it and I wouldn't propose that -- I think Derek described it in fact -- if we dredged in support of long-term traffic growth, actually the rates should go down, if you had a normal traffic growth.

(WITNESS EVANS: I think perhaps the problem is you're suggesting, if I understand you correctly, that the resupply users of the system should -- would carry the whole burden of the cost of dredging and I don't think that was the intention. If you were to somehow or other impose a charge, it would be on a unit ton basis, and it would apply equally to the pipeline builder as it would to resupply.

Q But the difficulty I have, and I'll only belabor this one more moment, is if the rate is \$10 to Inuvik now, and the dredging is done if the dredging is paid for by some generous applicant in advance there's no problem, everybody will get a long-term benefit. Everybody, including the, community resupply. But if the rate is \$10 now

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and it goes to \$12 in order to pay for part of the cost of dredging, isn't it likely that the people in Inuvik will say, "Well, we didn't ask for or require or need this dredging,"

And you'll have to say,
 "Oh well, in 25 years you're going to find that everything is a lot cheaper."

A:

No, I'm not suggesting it will be 25 years. I would suggest that as soon as the dredging were completed that the rates could be adjusted downward, as a consequence of the greater productivity, immediately.

Q When were the rates last adjusted downward?

A Never, never.

Q All right.

A But it's all relative.

WITNESS HAWRYSZKO: In '72 they went down.

MR. SCOTT: Those are all the questions I have, thank you very much.

(DEPARTMENT OF TRANSPORT SLIDES MARKED EXHIBIT
 821)

(WITNESSES ASIDE)

THE COMMISSIONER: When we reconvene on October 4th, at what time of day should the Inquiry reconvene?

MR. SCOTT: I think, sir, at 11 o'clock, between 10:30 and 11, depending on when

the plane gets here is the best time.

THE COMMISSIONER: And what are we to hear on October 4th?

MR. SCOTT: Well, the panels that are listed that day are COPE's land claims panel, and it appears that they will not proceed on that day but is more likely to proceed on Thursday. A Commission counsel panel with respect to development impact on Valdez in Alaska; a Commission counsel panel on impact of development on native languages; and Mr. Butters.

THE COMMISSIONER: That's all for October 4th, eh?

MR. SCOTT: That's all for October 4th.

THE COMMISSIONER: O.K. Well, thank you, Mr. Haaglund and members of the panel, first of all for preparing that most comprehensive and impressive analysis of transportation requirements related to the proposed pipeline project, and as you can see, they have been of very great use to the Inquiry staff and will be of very great use to all the participants of the Inquiry, and I hope that they will be of use to you yourselves, that pulling all that material together has not only served our purposes but I trust it has served yours as well. Sometimes there's a spinoff from the requirements that the Inquiry imposes on busy public servants like yourselves and we appreciate your coming here today to inform us so fully on all of these subjects. So thank you very much, sir, and members of the panel.

1 We'll adjourn until October
2 4th, Monday October 4th -- at what time?

3 MR. SCOTT: 10:30.

4 THE COMMISSIONER: 10:30, O.K.

5 (PROCEEDINGS ADJOURNED TO OCTOBER 4, 1976)
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M835
Vol. 191

AUTHOR

Mackenzie Valley pipeline inquiry:

TITLE

September 24, 1976 Yellowknife

DATE DUE

BORROWER'S NAME

347
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Vol. 191

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MACKENZIE VALLEY PIPELINE INQUIRY

Government
Publications

IN THE MATTER OF APPLICATIONS BY EACH OF
(a) CANADIAN ARCTIC GAS PIPELINE LIMITED FOR A
RIGHT-OF-WAY THAT MIGHT BE GRANTED ACROSS
CROWN LANDS WITHIN THE YUKON TERRITORY AND
THE NORTHWEST TERRITORIES, and
(b) FOOTHILLS PIPE LINES LTD. FOR A RIGHT-OF-WAY
THAT MIGHT BE GRANTED ACROSS CROWN LANDS
WITHIN THE NORTHWEST TERRITORIES
FOR THE PURPOSE OF A PROPOSED MACKENZIE VALLEY PIPELINE

and

IN THE MATTER OF THE SOCIAL, ENVIRONMENTAL AND
ECONOMIC IMPACT REGIONALLY OF THE CONSTRUCTION,
OPERATION AND SUBSEQUENT ABANDONMENT OF THE ABOVE
PROPOSED PIPELINE

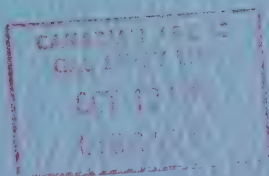
(Before the Honourable Mr. Justice Berger, Commissioner)

Yellowknife, N.W.T.

October 4, 1976.

PROCEEDINGS AT INQUIRY

Volume 192



Government
PublicationsAPPEARANCES:

Mr. Ian G. Scott, Q.C.,
Mr. Stephen T. Goudge,
Mr. Alick Ryder, and
Mr. Ian Roland, for Mackenzie Valley Pipeline Inquiry;

Mr. Pierre Genest, Q.C.,
Mr. Jack Marshall,
Mr. Darryl Carter,
Mr. J.T. Steeves, and for Canadian Arctic Gas Pipe-
Mr. Gerry Ziskrout, line Limited;

Mr. Reginald Gibbs, Q.C.,
Mr. Alan Hollingworth,
Mr. John W. Lutes, and for Foothills Pipe Lines Ltd.;
Mr. Ian MacLachlan,
Mr. Russell Anthony,
Prof. Alastair Lucas and
Mr. Garth Evans, for Canadian Arctic Resources Committee;

Mr. Glen W. Bell and
Mr. Gerry Sutton, for Northwest Territories Indian Brotherhood, and Metis Association of the Northwest Territories;

Mr. John Bayly and
Miss Lesley Lane, for Inuit Tapirisat of Canada, and The Committee for Original Peoples Entitlement;

Mr. Ron Veale and
Mr. Allen Lueck, for The Council for the Yukon Indians;

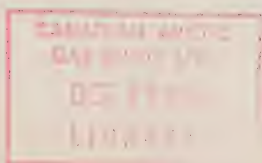
Mr. Carson Templeton, for Environment Protection Board;

Mr. David H. Searle, Q.C. for Northwest Territories Chamber of Commerce;

Mr. Murray Sigler and for The Association of Municipalities;
Mr. David Reesor,

Mr. John Ballem, Q.C., for Producer Companies (Imperial, Shell & Gulf);

Mrs. Joanne MacQuarrie, for Mental Health Association of the Northwest Territories.



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WITNESSES FOR THE M.V.P.I.:

Michael Darragh BARING-GOULD

Miss Marsha BENNETT

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- Cross-Examination by Mr. Sigler

- Cross-Examination by Mr. Bayly

- Re-Examination

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Michael E. KRAUSS

John T. RITTER

- In Chief

- Cross-Examination by Mr. Veale

- Cross-Examination by Mr. Bayly

- Cross-Examination by Mr. Ziskrout

- Re-Examination

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EXHIBITS:

822 Letter re Biographical Information of
Dr. Brownlie

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823 Letter & Enclosures from O. Schaefer

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824 Letter & paper from Dr. E. Cass

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825 Letter from Dr. J.A. Hildes

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826 Qualifications & Evidence of M. Baring-
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827 Native Peoples & Languages of Alaska, Map

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828 Qualifications & Evidence of M. Krauss

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829 Qualifications & Evidence of J. Ritter

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830 Mayo Indian Language Noun Dictionary

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831 Loucheux Athabascan Noun Dictionary

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1 Yellowknife, N.W.T.

2 October 4, 1976.

3 (PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT)

4 MR. GOUDGE: Sir, I think
5 we're prepared to begin our evidence for this morning.

6 THE COMMISSIONER: Excuse me,
7 before you begin I have a received a letter from the
8 Indian Brotherhood of the Northwest Territories from
9 C.G. Sutton, legal consultant, who says that he
10 wishes to advise me that Dr. Ian Brownlie, whose
11 opinion was submitted along with the evidence of
12 Professor Falk, is barrister of Gray's Inn and a
13 Fellow of Wadham College, Oxford; professor elect of
14 International Law, University of London; joint editor
15 of British Year Book of International Law; reader
16 and public international law, Inns-of-Court Schools
17 of Law.

18 MR. GOUDGE: We could file
19 that, sir, and it could accompany --

20 THE COMMISSIONER: Yes, that
21 will be marked as an exhibit.

22 I have also received letters
23 from Dr. Hildes of the Northern Medical Unit, from
24 Dr. Cass, and from Dr. Schaefer, lengthy letters in
25 answer to the matters that were put to them and to
26 which they undertook to reply, and these letters will
27 be marked as an exhibit or as exhibits in order of
28 the chronology of the dates they bear, and photostat
29 them, and any of the participants who want copies of
30 those letters can simply ask the secretary for them.

Baring-Gould, Bennett
In Chief

O.K.?

MR. GOUDGE: Yes sir. Our evidence for this morning is from Alaska again. We are calling before the Inquiry, sir, Professor Baring-Gould and Miss Marsha Bennett. I'd ask --- they have a film to show -- I would like to proceed, sir, by qualifying them and then asking them to show the film.

MICHAEL DARRAGH BARING-GOULD,

MISS MARSHA BENNETT, sworn:

DIRECT EXAMINATION BY MR. GOUDGE:

Q Professor Baring-Gould, can I begin with you, please? I can see you there behind the projector. You received your education, sir, at the bachelor's level at Williams College in Williamstown, Massachusettes, majoring in geology, is that correct?

WITNESS BARING-GOULD: Yes.

Q And you went on to a master's degree at the Inter-American Institute of Agricultural Sciences with a major in rural sociology. Is that so?

A That's so, it was in Costa Rico.

Q And your doctorate was obtained at Cornell University, majoring in development sociology with a minor in rural sociology in Latin American studies. Is that correct?

A That's right.

Baring-Gould, Bennett
In Chief

Q And since 1972 you've been a professor of sociology at the University of Alaska in Anchorage, and you continue to teach there.

A Right.

Q You've been engaged, I understand, in a number of research projects in Alaska in particular from 1973 through to the present in the Valdez project, of which you were the director. Is that so?

A Yes.

Q And it was a longitudinal study of structural changes and adaptations in the Community of Valdez as a result of rapid growth and impact from construction of the Trans-Alaska Oil Pipeline and terminal facilities. Is that a correct description of the project?

A Yes, it is.

Q And I take it that project is continuing.

A Yes.

Q In addition you are at present the director of the Kachemak Bay-Lower Cook Inlet project, is that so?

A Yes.

Q And it's a survey of seven communities and rural areas of the Lower Kenai Peninsula in Alaska to assess attitudes toward alternative policies of development and growth including attitudes towards local O.C.S. development in the Lower

Baring-Gould, Bennett
In Chief

1
2 Cook Inlet, is that right?

3 A Yes.

4 Q You might just refresh
5 our memories as to what O.C.S. is.

6 A O.C.S. is outer contin-
7 ental shelf. These are oil leases on lands outside
8 the three-mile limit, federal leases. One of these
9 lease-sales has been conducted in the Gulf of Alaska.
10 There are, I think, six or seven other leases on
11 the books for the next three or four years in Alaska.

12 Q Yes, and in addition
13 you are the director of a prostitution survey which is
14 a survey of residents in the Anchorage area to assess
15 attitudes toward enforcement and/or realization of
16 prostitution in Anchorage, is that correct?

17 A Yes.

18 Q And as well you've been
19 connected over the years with a number of other re-
20 search projects in your curriculum vitae which I propose
21 to table.

22 A Yes.

23 Q Now, Miss Bennett, if I
24 can turn to you, you received your bachelor's degree
25 from the University of Michigan in sociology, is that
26 correct?

27 WITNESS BENNETT: Yes.

28 Q And your master's
29 degree again in sociology from American University.
30 Is that so?

Baring-Gould, Bennett
In Chief

1 A Yes.

2 Q And you've done courses
3 for your doctorate in sociology at the University of
4 California, Santa Barbara Campus. Is that so?

5 A That's right.
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Baring-Gould, Bennett
In Chief

1 Q You are at present a
2 research associate of the Valdez Project?

3 A Yes, that is an ongoing
4 project and insofar as it is, I'm still working on it.
5 My present position is a project director --

6 Q Yes, and that's a study
7 of growth management, housing and population in the
8 Kenai Borough, is that so, and that project is ongoing
9 and it relates to the possible impact of O. C. S.
10 development on the Kenai Borough?

11 A Yes, it does.

12 (Inaudible)

13 Q Yes, and you're a member
14 of the American Sociological Association and the
15 Population Association of America?

16 A Yes.

17 Q Yes. I propose to table
18 the qualifications of both Professor Baring-Gould
19 and Miss Bennett as exhibits. Now, Professor Baring-
20 Gould, you brought with you a film of all these and
21 would you be good enough please, just before we show
22 it, to tell the Commission a little about what the
23 film will show.

24 WITNESS BARING-GOULD: We
25 brought the film because I think the film is basically
26 repetitive of the introduction of our written testimony.
27 The film was produced by the Alaska Humanities Forum
28 which is a state supported organization receiving
29 funds from the National Endowment of the Humanities
30 and, the film was made closely parallel to our particular

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1 study of Valdez. The film was funded and has been
2 produced to conduct, on a longitudinal basis, to produce
3 a film of Valdez as it existed, prior to the impact,
4 and sort of during the first year's impact and this is
5 the film which we've brought with us as an introductory
6 statement on what the community was prior to impact.

7 There are other additions
8 of this film which are presently being produced to
9 actually assess the impact of the pipeline on Valdez
10 and these unfortunately haven't been completed yet.
11 They're being filmed now. I guess we'll just leave
12 it at that. Perhaps then we could show the film, sir.

13 THE COMMISSIONER: Okay. I'll
14 take one of the better seats.

15 A Just before we do this--
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1 MR. GOUDGE: A prelude perhaps
2 Professor Baring-Gould then I could read your
3 evidence to the Commission please.

4 WITNESS BARING-GOULD: Okay.
5 Yes, an introduction to our testimony on Valdez and
6 in spite of our resumes, I'd like to state that we're
7 specifically providing testimony on the community of
8 Valdez and not other areas in Alaska. I'd like to
9 state several assumptions which I think are important
10 for what we have to say.

11 First, we view our role
12 as objective researchers of what has happened and
13 what people think in Valdez. We are neither advocates
14 nor opponents of the pipeline itself, but, merely
15 observers. Our data is derived from the people of
16 Valdez and what they think and we have attempted to
17 minimize our own personal interpretation of the effects
18 of impact.

19 Secondly, a research on
20 Valdez only measures very short term impacts and I'd
21 like this to be sort of clearly -- clearly understood
22 by people.

23 Our close study of the
24 community has only been through the first year and a
25 half or two years of impact and construction. We now
26 realize that major and permanent changes have occurred
27 to the community during the space of time, but, that
28 it will require a number of years and more continued
29 and detailed research and study before the full effects
30 of these impacts are manifested. We are consequently

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1 concerned in this report and what we have to say, only
2 with the very temporal immediate impacts of pipeline
3 construction in Valdez.

4 Finally, Valdez is one
5 community and I would like to suggest caution in the
6 application of these results to other towns, both in
7 Alaska and in Canada. Communities are very distinct
8 in their structure and their aspirations and these
9 affect how they will confront and adapt a change.
10 This should definitely be kept in mind as we read
11 our report.

12 We have noted in con-
13 sequent studies of other communities in Alaska, that
14 probably these communities would react the impact
15 very differently from the way in which Valdez reacted
16 and I'm sure that the communities in Canada will react
17 distinctively to the communities in Alaska. In spite
18 of this I think there are similarities. I think there
19 are lessons that can be learned from Valdez, the same
20 way that Valdez I think can learn from looking at the
21 impacts of North Sea Oil Development on the Shetland
22 Islands or wherever.

23 However, I think in
24 terms of looking at Valdez and in the context of that
25 film that there's several things which are extremely
26 important and which may serve to distinguish Valdez
27 from other communities.

28 The first of these is,
29 that Valdez is a white town, a white middle-class
30 predominately bureaucratic town. Forty percent of

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1 its employment in 1973 was with Public Services. It
2 had a very small native community, a totally ill-
3 defined native community. That's one incredibly
4 important distinction.

5 The second thing is
6 that Valdez is -- has a long history behind it. A
7 history of booms and busts behind it. It was dev-
8 eloped during the gold rush period. It went through
9 a period of incredibly rapid growth during the early
10 part of the century, the 1910's, the 1920's. A long
11 history of being a sort of a transportation centre
12 for getting into the interior of Alaska, a history
13 of trying to establish railroads, a history with
14 the court system. It had -- it was an important
15 town in Alaska in the 1910's and 1920's and during
16 the 30's and 40's, for various reasons which are
17 included in the beginning chapter of our report,
18 Valdez went through a period of economic decline.
19 This probably was culminated during the earthquake
20 when the town was forced to relocate. The figures
21 on employment in Valdez are pretty startling. In
22 1969 there was a 40 percent unemployment in the
23 community of Valdez and I think this sort of state
24 of economic instability, of economic decline during
25 the 40's, 50's into the 60's obviously sort of pre-
26 conditioned the type of response and the types of
27 attitudes which they would have towards the pipeline.
28 They saw the pipeline to a very large degree as a
29 means which they could utilize to regain some of the
30 economic benefits of earlier years, some of the status

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which the community had held in the state in previous years.

THE COMMISSIONER: The earthquake was in '63?

A The earthquake was in 1964, the Good Friday of 1964. During the earthquake 32 residents of Valdez were killed. It was an incredible trauma for the community. It resulted in the community finally being forced to relocate 3 miles to a new townsite.

O.K., I'm going to skip the introduction because I think the introductory part pretty much duplicates what some of the film had to say in terms of sort of describing physical location of Valdez, where it is, what it looks like.

I should say a word about our research methodology. We got into this study in 1973 and for probably the first year of the project, it was an unfunded project run totally by Marsha and myself and the students which we'd held in various classes. We used a variety of research methodologies in terms of conducting our research there. One of these has been formal surveys. In 1974, several months before construction is initiated we conducted surveys with almost all of the families in Valdez, one of the household heads in each family. Among these we selected a representative sample of 150 families, actually interviewed 136 of them which we designated as a panel sample which we wanted to re-interview and follow throughout the period of construction of pipeline. These families we interviewed in 1974, the 136, and we went back and re-interviewed most of these families, minus those who had left the community, 18 months or 16 months later in September of 1975.

These families which we interviewed were done with certain formal questionnaires and these probably constituted the backbone or the basis of our research. However, we used a variety of other methodologies. There was a census conducted in Valdez in early 1974. We conducted a census for the

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1 community in 1975, a total enumeration of the popula-
2 tion in the community, as well as certain housing
3 characteristics of the community. This was done in the
4 summer of 1975.

5 We have in addition maintained
6 general statistics from the social services and
7 social institutions of the community -- crime, main-
8 taining data on crime reports, telephone hookups, and
9 the various sort of social agencies and institutions
10 of the community.

11 Fourthly, I guess the other
12 maybe one of our more important means and maybe less
13 scientific means is that of participant observation,
14 maintaining very close sort of contact with the
15 community and the interviewing of key informants in
16 the community. Following the initiation of our
17 study in our first round of sort of formal interview-
18 ing, Marsha went to Valdez and lived in Valdez for
19 a year working in the City Hall, belonging to various
20 social organizations in the community, and she was
21 there for a year.

22 In addition to that we made
23 fairly frequent sort of trips back to Valdez to talk
24 with people about the community and the types of
25 changes they foresee in the community.

26 Our final means of data has
27 been that of sort of just getting sort of feed-back
28 from the community and the people we've interviewed.
29 We have a procedure whereby every person that we
30 interview were committed to sort of sending back

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1 results of our research to them, and we do this and
2 usually talk with some of them about it. We've had
3 one workshop in Valdez where we've gone back again and
4 talked about our study and in the process of sort of
5 workshops and meetings, solicited sort of reaction
6 and feed-back from our research, from them. But those
7 are our methodologies.

8 Let me get into the reading
9 the actual results of the research itself. Oh, a couple
10 of other things in terms of the methodology. When we
11 went back in 1975 and re-interviewed people, we were
12 re-interviewing members of our original sample. We also
13 interviewed at that time a random sample of individuals
14 who moved into the community during the intervening
15 year. The purpose of this was to determine the
16 basic characteristics of who was coming into the
17 community, what elements were being brought into the
18 community.

19 In addition to that, and
20 we'll include a chapter of this in our report, we
21 drew a relatively small sample of construction camp
22 workers from the three construction camps in Valdez,
23 and we interviewed them in order to determine primarily
24 their attitudes in relationship with the Valdez
25 community, how they interacted with the community;
26 and secondarily to sort of see what they did with some
27 of the earnings and resources which they got out of
28 the pipeline.

29 With that I guess I'll get
30 into actually sort of reading the report. It's

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1 divided into probably five sections. I'll skip the
2 first two already, their methodology and introduction.

3 The first section is on
4 Valdez as it was in 1974 in terms of anticipating
5 impact. The second section is on the major structural
6 and social changes that occurred in Valdez during that
7 first year. The third section pertains specifically to
8 the construction camp workers and their relationships
9 to the community. The fourth section would be on
10 the social problems and adaptations which the community
11 went through during that first year; and the fifth
12 chapter or the fifth section of it is primarily sort
13 of our view of future orientation and future direction
14 of the community, in addition to sort of our recommenda-
15 tions for other communities that might anticipate
16 similar situations of impact, parallel to Valdez.

17 O.K., Valdez then in 1974
18 in terms of its anticipation of impact.

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1 In the late winter and early
2 spring of 1974 when our first interviews were conducted
3 in Valdez, Valdez was already showing signs of impact,
4 even though the full initiation of construction was
5 still several months away. Experiences with impact
6 at that time were tied to the past, when, prior to the
7 pipeline construction itself, the pipe had crossed the
8 docks and high wages had been made in the painting or
9 coating of pipe. This was when the pipe was introduced
10 into Valdez in the early 1970's, before the whole pipe-
11 line got tied up in court.

12 Still, actual changes there
13 had been; the continued speculation in land, much of
14 this by outsiders from as far away as Los Angeles,
15 had begun a number of years previously and had served
16 to tie up most of the land available for development
17 in the community. The sale of businesses to external
18 concerns also continued. Over half the local businesses
19 had been purchased by outside interests and the new
20 businesses that opened, including two banks, were
21 exclusively controlled by outside interests.

22 The demographic characteristics
23 of the population had also undergone changes. The
24 proportion of children in the community to the working
25 age population had declined since 1970 and the percentage
26 of males had increases from fifty-one percent to fifty-
27 eight percent. Seventeen percent of the people inter-
28 viewed had lived in Valdez for less than a year, and
29 a total of thirty-six percent for less than three years.
30 By December, 1973, the total population of Valdez had

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1 increased to 1350, a thirty-four percent increase in
2 three years over the 1970 census. By 1974 the average
3 Valdezean only knew about one-half of the people in
4 town by name. Several years previously we were told
5 by the vast majority of our respondents, virtually
6 all people in Valdez knew each other on a very personal
7 basis.

8 In spite of these changes,
9 the community in 1974 retained many of the characteristics
10 of an intimate small town. Attesting to this were the
11 community calendar with the birthdates of all residents,
12 the relatively high proportion of people in town who
13 still did know each other on a first name basis, the
14 high proportion of families interviewed who had
15 relatives living in Valdez and who said that all or
16 almost all of their best friends lived in Valdez, and
17 the high numbers of families who would never consider
18 moving away from Valdez.

19 Doors on homes were locked
20 by only a minority of families, although this was
21 changing and the values stated by people indicated
22 an ability to count on neighbours, define human nature
23 as cooperative, and state that most people were help-
24 ful in their relationships with others. Given the
25 high proportion of state and professional employment
26 in Valdez, which is often associated with more formal
27 and less personal relationships, the concept of a
28 small and close community appeared relatively strong.

29 Social divisions within the
30 town, however, were strong, and these divisions were

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1 based primarily on length of residence and employment.
2 Twenty-seven percent of the family heads interviewed
3 had lived in Valdez at the time of the earthquake, and
4 frequently their conversation regarding Valdez pertained
5 to the past and life in the former community.

6 In their social relationships,
7 they interacted primarily with other old-timers and
8 they shared many of the same attitudes and values.
9 Included among these were positive orientation toward
10 the potential benefits of the pipeline, in spite of the
11 fact that only a very small minority of around fourteen
12 percent actually anticipated going to work on the
13 pipeline themselves.

14 In contrast to the old-timers,
15 a higher proportion of the newer residents were those
16 that had moved into the community from sort of ten to
17 about two or three years previously and many of whom
18 were employed professionally, viewed the coming impact
19 with greater hesitancy and in more negative terms.
20 In part, this may have been due to their strong affinity
21 for the small town concept; and many people who had
22 moved into Valdez had moved into it for that reason.
23 This group constituted the highest percentage who had
24 mentioned small town environment as the reason for
25 moving to Valdez.

26 In part, it may also have been
27 due to their concentration in employment in those social
28 institutions of the community, such as the hospital and
29 schools which would most directly bear the brunt of
30 problems stemming from impact and rapid population

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1 growth. As would be expected, those who had moved into
2 Valdez during the previous two years, tended to be the
3 most marginal to the community in their social
4 relationships and most solicitous of the personal
5 pipeline benefits, such as pipeline jobs.

6 Although length of residency
7 represented one major dimension on which the Valdez
8 population can be stratified, there were also several
9 others. One's position in the community was strongly
10 influenced by one's place of work. In particular, both
11 the Highway Department and the hospital formed a basis
12 for friendship and social groups, and influenced
13 membership in many of the formal organizations that
14 existed in the community. Participation by community
15 members in these organizations prior to impact was
16 relatively high, as were other characteristics of
17 participation such as voting and City Council attendance.

18 Geographically, the community
19 was relatively homogeneous. Neighbourhoods within the
20 town were not defined as such by residents and the sole
21 meaningful distinction in the community existed between
22 those living in town and the more isolated homes out the
23 Richardson Highway and the Loop Area Division to about
24 three or four miles from town. This homogeneity was
25 also evident from an ethnic standpoint, Although Valdez
26 is a very dominantly white community, sixteen percent
27 of the population in 1970 was Alaskan native, pre-
28 dominantly Aleut-Eskimo. However, most native families
29 were intermarried with whites, many held state jobs,
30 homes were scattered throughout Valdez and no separate,

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1 discernible native community existed as in many other
2 locations in Alaska.

3 Valdez in 1974 had both
4 advantages and disadvantages in its relative ability
5 to confront the growth caused by impact. The greatest
6 disadvantage was the ^{small} size of the community itself, in
7 the inadequacy of all services and utilities to provide
8 for the demand that would be generated by the growing
9 population. The most important of these is the shortage
10 of housing and the physical infrastructure necessary
11 to expand housing rapidly; a fact that was partly the
12 result of Valdez's recent move to the new townsite.

13 Sewer and water systems, the
14 telephone and electrical systems were all close to
15 maximum capacity use by the existent population in
16 1974. These systems were dependent on actual shifts
17 and demands of funding expansion and they could not
18 respond to the acute population change without shortages
19 and delays. In talks with officials in the telephone,
20 electric and city utilities, the lead time for expansion
21 of these services ranged from twenty-one months for
22 the sewer system to twenty-six months for the telephone.

23 Because of limited bonding
24 capacity, the schools were forced to do a three stage
25 expansion. Actual occupancy of a new elementary school
26 was not achieved until January, 1976, twenty months
27 after pipeline construction and planning had been
28 initiated.

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1 Planning for earlier expansion
2 of these and other services had been held to a minimum
3 for various reasons. Foremost among these, a factor
4 mentioned strongly by half of those we interviewed was
5 lack of support by the state government. Actual com-
6 mitment of state monies for needs such as school,
7 sewer and water expansion would come, as they did,
8 only when impact was actually demonstrated; the first
9 \$2 million impact grant was not received by Valdez from
10 the state until three months after construction had
11 actually been initiated.

12 A second major reason
13 appeared to be a lack of concern for the problems of
14 impact. The early and positive euphoria toward the
15 pipeline, and the uncertainties generated through
16 its delays in the Courts, dissipated attention from the
17 needs that would be created once construction began.
18 In addition, there existed uncertainty and lack of
19 information over what the pipeline itself would bring
20 to Valdez. In spite of extensive environmental impact
21 studies and numerous local planning meetings, a
22 planning study grant to the city by Alyeska, the oil
23 industry provided very little anticipatory informa-
24 tion on specific plans or needs for Valdez. At the
25 same time, the continuation of negotiations between
26 industry and community as construction approached,
27 over issues such as housing, etc., precluded the
28 early resolution of many issues. From the standpoint
29 of the city, these negotiations were in turn compounded
30 by the assumption of a majority of the Valdez residents

On the positive side, however, Valdez had also several strengths. Most notable among these was local expertise, both within the city administration and outside it, and the experience that had been gained from the relocation of the town following the 1964 earthquake and the Kenai Peninsula's earlier oil development experience in the mid-1960s. Not only was good administrative leadership available, but a familiarity in dealing with both state agencies and industry existed. Secondly, although the physical infrastructure supporting residential expansion was at capacity, it was in place and could be expanded without extensive engineering and development work preceding construction. Finally, a significant level of congruence existed between Valdez in 1974 and the future conditions that would be generated by the petroleum industry; shared white middle-class values, an experience working for and dealing with large formal bureaucracies -- they haven't been employed in highways and hospitals and things like that -- and a positive orientation toward the industry and potential benefits of impact.

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The specific attitudes of Valdez residents in 1974 toward impact tended to be somewhat variable, as was seen in the film. While some opposed all changes that were likely to occur in Valdez, many more viewed the pipeline in highly beneficial terms, most particularly in regard to the increased commercial activity, general population growth, and an expansion in community services. Of all the changes anticipated by all our respondents, slightly more than half the responses were perceived in positive terms. Negative changes most commonly anticipated included inflation and housing shortages, an increase in crime, loss of the small town attributes, negative effects on the environment, and the overcrowding of community resources in approximately that order. In spite of the fact that both positive and negative effects of development were anticipated, however, most Valdez residents in 1974 were satisfied to view these problems in a more or less speculative manner. Construction and impact approached, and changes were foreseen, but there was relatively little public involvement to either confront or take specific advantage of these changes. Less than a third of the people we interviewed mentioned taking any steps, and these were almost exclusively individual activities such as seeking a job, taking security precautions, renting a house or initiating a business activity. Only a very small number -- and this was probably about 3 or 4% of those interviewed -- had taken specific public action to assist groups or the community to meet

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1 those changes that were anticipated. This wait-and-
2 see approach reflects a general attitude consistent
3 with previously noted observations, that many in
4 Valdez anticipated the benefits that would accrue
5 to both individual and community from pipeline devel-
6 opment, but without any active commitment on their
7 part to direct these changes. Direction in terms of
8 dealing with impact was left to the city administration.

9 Valdez during its first year
10 of impact. By 1975, Valdez was well into its first
11 year of impact with everyone in town fully familiar
12 of the meaning of boom town growth. From a population
13 base of 1,350 in January, 1974, the town and camp
14 population began a steady increase in the summer of
15 1974 to a peak of over 6,500 by July, 1975.
16 Fivefold increase in population in that 18-month period.
17 During the previous summer the 500 workers located
18 at the airport camps had been shuttled back and forth
19 to the terminal site by boat or bus. By April 1975,
20 1,800 men and women lived or worked at Terminal Camp
21 and by July this total had risen to 2,672. The town
22 population alone had also grown to over 3,500, and the
23 fast-movement of the construction project was paral-
24 lelled by a rapid expansion in businesses, crime,
25 school children and buildings. Demand on services as
26 varied as the hospitals, grocery stores, telephone
27 and ambulance rescue squad, etc. had escalated equally.

28 During 1975 the city issued
29 135 new business licences, compared to 65 the previous
30 year. Anchorage-based pipeline suppliers and office

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1 supply businesses had set up shop in Valdez, and other
2 new stores catered to the more specialized demands
3 for a growing and well-paid population. Quality plants
4 and pottery, expensive recreational equipment, stereos
5 and fine silver, etc., all made their appearance in
6 Valdez, along with expensive liquor and groceries,
7 modular homes, snow machines, motorcycles, and trailers,
8 etc. A new doctor, dentist and expanded medical
9 services were established. Operation of the general
10 hospital was taken over by the city, and a state
11 trailer court had to be opened in late 1974 to provide
12 housing for state highway and Harborview Hospital
13 employees. The high pipeline wages were a constant source
14 of conversation. Camp workers often joked about
15 how little they did for their high salaries, and others
16 complained of the high cost of living brought by both
17 these wages and the spiraling labor costs that
18 had spread throughout Valdez.

19 By the time we re-interviewed
20 our original respondents and a new sample in the early
21 fall of 1975, 16% of the original families had
22 left town. Some of these were professionals who moved
23 on, others were advocates of the small community
24 ethic and could not afford the higher prices or
25 appreciate the stronger money orientation that was
26 spreading in town. Several others had retired or mar-
27 ried. Valdez had become a much more work-oriented
28 adult population. Even if camp residents are
29 exclud~~ed~~ed from the proportion of the town population
30 aged 19 to 65, had increased from 60 to 69% from the

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1 previous year. If camp residents are included, over
2 80% of the town population consisted of working adults,
3 or working age adults.

4 The aggregate occupational
5 structure of the community, again excluding the camps,
6 had undergone a massive change in the space of a
7 year. The most dramatic of these are the great increases
8 in employment by Alyeska up to about 13% from almost
9 nothing, and the primary contractors for the pipeline,
10 and increase in employment by other construction firms,
11 the increase in trucking, from the number who were not
12 employed.

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1 This last category includes
2 predominantly housewives with new families employed on
3 the pipeline, a characteristic quite different from
4 the traditional Valdez family in which a majority of
5 the females are employed. On the other hand, the
6 proportion of public employment in Valdez declined
7 sharply from forty percent of all workers in 1974 to
8 under eighteen percent in 1975. Again, this is exclusive
9 of the camps.

10 This proportional decline
11 can be seen even in those institutions such as the
12 hospital and schools and government which significantly
13 expanded their staff to accommodate impact growth. These
14 declines highlight the bind these employers felt in
15 both recruiting staff in a more competitive labour
16 market and in coping with demands from a rapidly
17 expanding public. These figures also document the rapid
18 change which took place in Valdez from a community
19 dependent on public employment to one based on con-
20 struction and the administration or management of the
21 pipeline project.

22 In spite of this change in
23 occupational structure, however, a surprisingly low
24 level of turnover existed in the jobs held by older
25 Valdez residents. In almost all the occupational
26 employer categories, changes were minimal with exceptions
27 limited to a slight increase in employment by Alyeska
28 and Fluor, a decline in proportional employment of
29 former Valdezeans at the hospital and as service workers,
30 and a serious decline in employment related to fishing.

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1 Overall, however, the data
2 indicate that the change in occupational structure was
3 almost totally due to influx of new residents and
4 employers, with relatively little transition in jobs
5 during the first year by former Valdez residents
6 themselves.

7 This can be seen more clearly
8 by comparing the specific jobs held by the household
9 heads in our panel sample who we interviewed in
10 1974 and whom we interviewed again in 1975. Over a
11 sixteen month period, thirty percent of this sample
12 had actually changed their place of employment. Of
13 those who had changed, almost half had gone to work
14 on the pipeline or for one of the subcontractors. A
15 high degree of selectivity existed, however, in the
16 types of jobs in which turnover occurred. Fourteen
17 of the seventeen people in our sample who were employed
18 at Highways remained with their former jobs, as did
19 ten of the twelve employed at the hospital.

20 Conversely, none of the seven
21 who were employed in fishing in 1974 still did this in
22 1975. Of those residents holding professional,
23 managerial and technical jobs, eighty-five percent have
24 remained at their former positions; whereas fifty
25 percent of those working as labourers in skilled or
26 unskilled employment had changed jobs. In other
27 words, there was a strong tendency for those employed
28 in the higher status and more secure jobs in Valdez
29 to remain with their employment, be it for reasons
30 of professionalism or the protection of benefits and

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1 security; whereas those in the less skilled and the more
2 insecure occupations, turned to the pipelines. From
3 the perspective of the community, this can be seen as
4 an attempt to maintain the better, more permanent jobs
5 for the Valdez people themselves and in the process to
6 preserve the traditions and lifestyles of the community.

7 Two further changes that were
8 closely related to occupational change in Valdez were
9 an increase in incomes and the creation of distinct
10 neighbourhoods within the city. Per capita income of
11 household heads on our panel rose dramatically from
12 a median individual income of \$11,900 reported in 1974
13 to over \$24,000 in 1975, while the median family income
14 for all members of the household combined rose from
15 \$16,400 to \$30,600 in 1975.

16 In addition to these new high
17 levels of reported income, several additional factors
18 warrant attention. The first is that the increase in
19 level of income was not restricted to those working
20 on the pipeline. They occurred across all occupations
21 as employers in general, including the city and state,
22 were forced to increase salaries to meet local conditions
23 of inflation and to prevent the loss of personnel.
24 In spite of this, increases in income were greatest
25 among those who did work in construction and on the
26 pipeline.

27 Since most of those who moved
28 into pipeline employment came from less skilled, lower
29 paid and more impermanent jobs within the community,
30 the result was a greater levelling of incomes within

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1 Valdez. The variance, for example, of income within
2 the community declined significantly between 1974 and
3 1975. Although this might be considered an unanticipated
4 and beneficial effect of impact on the community, in
5 other words of less difference between social classes,
6 it may pose significant problems during the post-
7 construction period. When high-paying construction
8 jobs are no longer available and the people who are
9 holding these jobs at present are forced back in
10 traditional low salary pursuits within the community,
11 such as fishing, et cetera, much higher levels of
12 inequality may be anticipated and obviously sort of
13 necessary adaptations to this.

14 One further change in income
15 was the fact that the income levels of our panel sample
16 remain considerably higher than those of families who
17 had moved into Valdez during the previous eighteen
18 months, compared to the \$24,000 annual income of
19 household heads and \$30,000 family income of our old
20 sample of old residents. The median income for new
21 residents moving into the community was \$22,700 in
22 1975 for the household and \$26,900 for the combined
23 family income.

24 In contrast to much popular
25 myth, the income levels of community residents appeared
26 to remain significantly higher than those who moved
27 into the boom town community to work, including those
28 of the administrative personnel who were managing the
29 construction project.

30 In addition to income levels,

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1 a major change occurred in the spatial distribution of
2 Valdez. The influx of workers and new residents and
3 lack of existent housing in Valdez permanently changed
4 the forementioned homogeneity that had existed in the
5 community. Aside from the work camps themselves, the
6 Alyeska and Fluor subdivision has become a definite
7 subcommunity within Valdez, one in terms of space which
8 probably duplicates the community. It is clearly
9 distinguishable from the rest of the community, not
10 only in appearance, general standard of living and the
11 employment of residents, but also in the mutual
12 interests and sharing of friendships and social
13 relations.

14 Although some residents
15 actively participate in organizations of the larger
16 Valdez community, these are residents of the manage-
17 ment residents of the Alyeska and Fluor companies, in
18 general allegiances lie with other towns and com-
19 munities. Instance of resentments and hostilities
20 were reported by respondents from both communities,
21 although these are openly manifested only rarely.

22 The situation of Alyeska and
23 Fluor housing, however, is not unique. The State
24 Trailer Park, open to provide housing for state employees,
25 is one example of this; one subdivision developed
26 outside of town is another example.

27 THE COMMISSIONER: Excuse me,
28 Mr. Baring-Gould. Fluor is the company that is
29 building the terminal. Is that--

30 A Fluor is one of the

Baring-Gould, Bennett
In Chief

1 primary subcontractors of Alyeska or contractors of
2 Alyeska. Among several others, Fluor is the biggest.

3 It was not until 1976 that the
4 city initiated attempts to centralize trailers in
5 specific areas, such as at the airport and this has
6 been met with strong resentment by residents. The
7 tendency to cluster in employment-related housing areas
8 has further magnified the importance of employment in
9 defining friendship patterns, and may have many long-
10 term consequences for the community.

11 One result of this growth in
12 locality groups has been the development of small,
13 incipient social organizations based in the neighbour-
14 hood and concerned primarily with neighbourhood
15 interests and problems. One outcome of this has been
16 a lower level of public participation in the broader
17 political and social organizations of the Valdez
18 community. This is striking among the newer residents
19 who consistently rank fifty percent or more below the
20 longer-term residents in their attendance at City-
21 Council meetings, voting at elections, and participation
22 in the various social organizations of the community.

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In contrast, no definitive changes in public participation were observed on the part of longer term residents, with indicators such as City Council attendance, voting and membership in formal organizations remaining largely the same as the previous year. In general, it appears that most newer residents of the community withdraw into their work and housing clusters and leave the expanded social scene to older Valdez residents, a factor which may tend to reduce conflicts that might otherwise develop within the town. Further, the better and more permanent housing of older residents is reflected in different leisure time pursuits. Although family and informal socializing and outdoor recreation were strong favorites by both groups, older residents favored activities such as reading, church activities and voluntary group work to a greater degree than newer residents, and going out to restaurants and bars to a lesser degree. Compared to their responses of the previous year, older residents showed declines in public areas such as attending large social functions and going to restaurants and bars, and increases in small private social entertainments and family activities. Similar type responses were obtained from a series of social value questions which showed older residents placing an increased value on friends and neighbors. What may also be very significant is that larger proportions in 1975 than in 1974 also responded more strongly to questions on alienation than they had previously, and there was stronger

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1 agreement that neither the state nor Alyeska could
2 be depended upon to do was in the very best interest
3 of Valdez.

4 In summary, major changes
5 have obviously occurred but these changes are largely
6 due to the great influx of new residents and the dom-
7 inant proportion of the population which they presently
8 constitute over the majority present. However, few of
9 these changes have been incorporated into the lives
10 and values of the older Valdez people themselves,
11 outside of the significant number which have left
12 the community. The primary response or adaptation of
13 the people in Valdez has been one of guaranteeing
14 the maintenance of traditional values and lifestyles.
15 Where changes have occurred, they have been primarily
16 in the area of withdrawing from the more impacted
17 aspects of community life such as going out to
18 restaurants and things like this, and reinforcing
19 those positive values and social relationships that
20 were characteristic of former years in the community.
21 Whether this attitude of withdrawal and response to
22 change will permit the community to actively confront
23 and deal with important issues in its future, of
24 course, remains at present uncertain.

25 O.K., on the construction
26 camp workers. The 61 construction camp workers who
27 were interviewed were residents of the Terminal Camp
28 Keystone and Kennedy. Keystone and Kennedy Camps
29 are within the city at -- located at the airport.
30 Terminal Camp is the largest containing 2,300 workers

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In Chief

1 when we did our interview, and I think now it's up to
2 almost 4,000. It is located across the bay 15 miles
3 from downtown Valdez.

4 No interviews were conducted
5 at a fourth camp at Sheep Creek just outside the city
6 limits on the Richardson Highway. In spite of the
7 fact that all workers interviewed were selected on
8 a random basis, the findings should be treated as
9 somewhat tentative and suggestive. This is due to
10 the small size of the overall sample and the fact that
11 the proportional selection was weighted in favor of
12 the two smaller camps.

13 The popular views of
14 construction camp workers is frequently that of hard wor-
15 king, hard-drinking men from outside who have come to
16 Alaska to make a quick fortune. Regardless of whether
17 they spend money wisely, they are frequently portrayed
18 as outsiders, different from the community in which the
19 camp is located, and with little meaningful involvement
20 of contributions which they can make to this community.

21 THE COMMISSIONER: Excuse me,
22 Dr. Baring-Gould, the -- are the people in these
23 camps, the men in these camps employed -- I visited
24 Valdez last year and I'm just trying to recollect,
25 are the men in these camps employed on pipeline
26 construction or are they employed in building the
27 terminal?

28 A Both.

29 Q O.K.

30 A Those at the terminal

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In Chief

1 are employed mostly at the terminal site, but they
2 are employed in both.

3 Q Yes.

4 A Some of these generaliz-
5 ations appear false in the case of Valdez. To a very
6 surprising degree the basic characteristics of pipeline
7 camp workers parallel those of other members of the
8 Valdez community. Although fewer of the pipeline
9 workers were married, and they tended to be younger
10 in age, they shared characteristics such as similar
11 levels of education, religious affiliation and race.
12 One exception to this was that actually that more
13 of the pipeline workers were native. They also shared
14 many attitudes and values common to Valdez. In answer
15 to questions on the desirability of small town attri-
16 butes, camp workers responded as similar or stronger
17 adherents of the small town ethic than Valdezians
18 themselves. As compared to town people, a higher
19 proportion of camp workers also perceived modern
20 changes as negatively affecting traditional Alaskan
21 values, and more were actually opposed to those changes
22 occurring in Alaska, particularly those concerning a
23 loss of personal friendliness and low population
24 density. Similar to Valdezians, they perceived econom-
25 ic factors and jobs as the major gains in a changing
26 Alaska.

27 Although three-quarters of the
28 workers interviewed identified themselves as current
29 Alaskan residents, the weakness of their ties to
30 the state is attested by the fact that only 49% were

1 registered Alaska voters. 42% identified their
2 families as residing out of the state, and 30% sent
3 at least part of their monthly pay cheques outside
4 the state. Although only a small minority claimed
5 they had come to Alaska seeking pipeline employment,
6 a full 40% failed to hold Alaska State resident status,
7 at the actual time of their initial employment on the
8 pipeline and 19% had come directly to Valdez from
9 residences outside the state. Over half had
10 been previously employed in the construction industry
11 although only 25% had had prior employment experience
12 with the petroleum industry.

13 On the pipeline the
14 specific employment of those interviewed varied, with
15 the largest categories being heavy equipment operators,
16 unskilled laborers, and bull cooks; the dominant
17 union affiliations were Laborers, Operating Engineers,
18 Teamsters and Culinary Workers. Gross monthly salaries
19 averaged \$3,900 with net take-home pay after taxes of
20 \$2,500 per month. These high levels of pay were
21 mentioned as the most satisfactory aspect of their
22 work, whereas the weather, physical isolation, boredom
23 with their work and long working hours were considered
24 the least satisfactory aspects. Attitudes toward the
25 various services provided by the camps were all rated
26 as good or very good by a clear majority of workers.
27 Although their average length of residence in Valdez
28 had only been 3 -- just over three months, most hoped
29 to continue working on the pipeline as long as employ-
30 ment prevailed. Contrary to much public opinion on the

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1 dissipation of construction earnings, a majority of the
2 workers held very specific plans for the accumulation
3 and use of savings earned through their wages, and
4 almost half of those interviewed had already set aside
5 half or more of the savings required to meet their
6 potential goals. Our conclusion was that a strong
7 majority of workers used the opportunity of the
8 pipeline to achieve quite common goals that they
9 probably could not realize or not nearly so quickly
10 through conventional employment. We did obtain
11 specific data on the use of earnings which I won't
12 bother to detail here. The most important statistics
13 are that over half of all earnings reported by the
14 people we interviewed went directly into Alaskan
15 banks, an average of almost \$600 per worker per
16 month was sent directly out of the state and under
17 \$200 per worker per month was actually spent in the
18 local economy.

19 Given the long working hours
20 and weeks, and the self-confined nature of the
21 camps, it is not surprising that the camp residents show
22 minimal participation in the life of the Valdez
23 community. In spite of bus service, only 6% of the
24 camp workers went into Valdez on a daily basis, more
25 than half made one or less trips to town per week,
26 and the average pipeline worker spent a total of only
27 four hours per week in Valdez. Although activities
28 of workers in Valdez vary, the only ones in which a
29 majority of camp residents participated were shopping
30 and bars, and only a minimal proportion were involved

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In Chief

1 in other forms of social, civic or recreational
2 activities of the community.
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1 Even at bars few workers
2 are regular habituées. Only two percent stated that
3 they spend more than six hours each week in a Valdez
4 bar for example. Since the most common activities
5 are shopping, drinking and banking or either those
6 which are undertaken alone or in the company of other
7 pipeline workers, it is hardly surprising that almost
8 half the camp workers knew no Valdez resident on a
9 personal basis.

10 Drug store items, liquor
11 and reading materials headed the list of service items
12 purchased in Valdez. On these and other items in
13 Valdez the average camp resident reportedly spent
14 \$184.00 monthly. Eighty percent of the workers actually
15 spent less than \$100.00 per month in the community,
16 even though they had open access to it.

17 The social participation
18 of workers in the Valdez community was minimal. Only
19 an extremely small minority of several percent par-
20 ticipated in the various political, educational or
21 cultural activities of the community. Slightly larger
22 proportions attended church services or informal
23 social gatherings. Although the residents of Valdez
24 who worked in the camps and a few other camp residents
25 with continuing ties to Valdez do participate in the
26 life of the town. The work schedule and isolation of
27 the camps clearly limit active involvement outside
28 of the economic sphere. In spite of this social
29 isolation, the attitudes of camp workers towards
30 Valdez were generally positive. Only twenty-eight

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In Chief

1 percent stated that they disliked the community and
2 only seven percent, that they disliked the people of
3 Valdez. The scenery and overall qualities of the
4 small town combined with the availability of services
5 which are non-existent in most pipeline camps, were
6 those attributes which workers like most. Factors
7 liked least, were the lack of more services and high
8 prices, a view shared by the community as well. And
9 some of the negative aspects of impact such as
10 crowding.

11 The social relations
12 existent between town and camp can best be described
13 as benign. Although certain resentments towards camp
14 workers exist, due to acts of rowdiness and because
15 workers have taken over as clientele in various rest-
16 aurants and bars. Little open animosity is actually
17 evident. Fights, where they have occurred and there
18 certainly have been, are normally between pipeline
19 workers themselves and not between members of the
20 community and camp and cases of complaints against
21 camp residents are equally rare. In several cases
22 general animosities towards the camp are more than
23 compensated for, by significant contributions which
24 individual camp workers have made to the town.

25 To a large extent how-
26 ever, Valdezians have withdrawn from participation
27 with workers, avoiding those bars and institutions
28 most commonly frequented by camp residents, including
29 the camps themselves. A modus operandi of mutual
30 toleration consequently exists, often with limited or

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1 misinformation of the realities in which the two
2 separate communities live. Given the working hours
3 and conditions under which both groups live, this
4 situation is probably unavoidable, even though it is
5 unfortunate that the common interests and resources
6 which workers could contribute to the Valdez community
7 are not shared in more significant ways.

8 THE COMMISSIONER: Mr. Baring-
9 Gould, I wonder before you go on, if you would like
10 to break for lunch. It's quarter to one.

11 WITNESS BARING-GOULD: Yes, I
12 think we should if that is alright and we can stay
13 on track this afternoon.

14 MR. GOUDGE: Yes, perhaps we
15 could come back at 2 o'clock.

16 THE COMMISSIONER: Okay.
17 We'll adjourn till 2 and then carry on.

18 (LETTER RE BIOGRAPHICAL INFORMATION OF DR.
19 BROWNLIE MARKED EXHIBIT 822)

20 (LETTER & ENCLOSURES FROM O. SCHAEFER MARKED
21 EXHIBIT 823)

22 (LETTER & PAPER FROM DR. E. CASS MARKED
23 EXHIBIT 824)

24 (LETTER FROM DR. J.A. HILDES MARKED EXHIBIT 825)

25 (QUALIFICATIONS & EVIDENCE OF M. BARING-GOULD AND
26 MISS BENNETT MARKED EXHIBIT 826)

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28 (PROCEEDINGS ADJOURNED TO 2 P.M.)
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(PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT)

MR. GOUDGE: I think, sir,
we're ready to resume.

THE COMMISSIONER: Okay.

MR. GOUDGE: I wonder, if
Professor Baring-Gould if you might pick up your
evidence at page twenty-seven. We're beginning with
Section 6.

WITNESS BARING-GOULD: This
section deals with social problems introduced into
the community during the first year of impact and the
attempts on the part of the city to deal with these.
In spite of their early optimism toward pipeline
development, most people in Valdez clearly recognize
and anticipated a temporary increase in social problems
and personal inconveniences. Most of these concerns,
however, were restricted to problems such as crime and
alcohol abuse, that could be directly related to fast
money in the construction town environment.

On the other hand, relatively
few had anticipated the colossal demands that would
be placed on conventional community services from a
rapidly expanding population. Due to the lag time
involved in funding and planning, community response
to these issues had to await a significant disruption
in service deliveries. The 1975 survey requested
residents to rate their satisfaction with various
community services. These telephone service, grocery
and restaurant service, parks and recreation, and
planning and zoning received the poorest ratings.

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The telephone system, groceries and housing and sewage disposal all represented classic cases of system overloads in which serious disruptions occurred.

For example, to the twelve telephone circuits and one thousand installed telephones in January of '74, four thousand telephones and thirty-two more circuits had been added by January, 1976. In spite of these, the system remained overloaded with both local and long distance calls extremely difficult to make. For example you had to probably dial or phone around eighty or ninety times in order to make a local connection.

Even minimum system expansion required one to one and a half years in order to obtain REA financing, the engineering studies for system design and both the buildings and equipment for local expansion. In the case of groceries, bare shelves and severe shortages forced many residents to shop in Glenallen, over one hundred miles away, in the summer of 1974, prior to the eventual opening of the second store. In spite of expanded sales, food prices have remained high. Throughout the first years of impact, food prices remained relatively constant at levels about 140 percent of above Seattle prices or of Seattle prices.

A major lack of housing constituted probably the greatest impact problem in Valdez during 1974 and 1975. The July '75 census of Valdez showed ten percent of the population living out of

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In Chief

1 campers or boats, another forty-one percent in
2 trailers and eight percent in motel rooms or apartments
3 and bunk houses, provided by employers. Over half
4 the housing consequently was of a temporary nature.
5 Low cost housing was virtually impossible to obtain, with
6 rentals to newcomers ranging anywhere from \$500.00 to
7 \$1,500.00 per house, per month and trailer space rent
8 from \$75.00 to \$140.00 per month for the space.

9 The full impact of this
10 shortage fell on new community residents, prospective
11 construction workers and their families and new state
12 and city personnel. Various individuals, including
13 school teachers, specifically left the community due
14 to inadequate or high cost housing and it undoubtedly
15 served to discourage further immigration that might
16 have otherwise taken place.

17 Various factors contributed
18 to the shortage of housing, not the least of which
19 were the bureaucratic and legal restrictions imposed
20 by housing and urban development as a carry-over from
21 development of the new townsite. No definitive
22 community policy on housing emerged during the first
23 year and a half of impact other than the allocation
24 of state impact monies for additions to the water and
25 sewage system. The first stage expansion of these
26 systems was not completed until late in 1975 and they
27 have since eased the market considerably.

28 In the meantime, private
29 contracts were made to supply land to Alyeska for
30 professional housing with utilities supplied by Alyeska,

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In Chief

1 and the city auctioned its few available trailer sized
2 lots at prices around \$10,000 each. In spite of
3 specific zoning requirements, the unwritten policy of
4 the city became one of tolerating exemptions to codes
5 in order to provide for the temporary needs of
6 individual residents.
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In Chief

1 In the process temporary housing proliferated. In
2 June 1976 the city initiated attempts to centralize
3 trailer development at the airport, a move carried out
4 in spite of opposition from various sectors within the
5 community. The extremely high cost of permanent housing,
6 which has escalated to approximately \$90 per square
7 foot, and difficulty in obtaining bank mortgages in
8 some contested subdivision areas have severely re-
9 stricted the construction of any permanent housing in
10 Valdez.

11 Although other areas
12 were also severely impacted, they were able to adapt
13 more quickly in changing conditions. Similar to the
14 situations of housing, however, the process involved
15 has been one of dealing with problems from a long
16 term perspective only after short term reaction to
17 critical needs. In the case of schools, the first
18 year of impact was characterized by double shifting,
19 useage of temporary modular units purchased with state
20 impact funds, and temporary classrooms in other com-
21 munity facilities. Bond elections held in 1974 and
22 1975 finally authorized expansion of the elementary
23 and high schools; actual occupancy of the new ele-
24 mentary school did not occur until January '75, 20
25 months after pipeline construction had begun.

26 In contrast, other
27 services received relatively high ratings of satis-
28 faction from Valdez residents. Among these was the
29 volunteer fire department, an organization of con-
30 siderable community pride, in which many men partici-

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In Chief

1 pate. Also ranked relatively high was the Valdez
2 Police Department; with additions in staff from two to
3 11 at present. This constituted one of the few ser-
4 vices that had received a substantial increase in
5 staffing. To a large extent this policy was con-
6 sistent with the forementioned and foremost concern
7 of Valdez residents concerning impact, namely forms
8 of deviant behavior such as alcoholism, drug use,
9 disorderliness and violence, prostitution and crime
10 in general. Monthly statistics on criminal complaints
11 and arrests from the Valdez Police Department, vali-
12 date these attitudes in regards to crime. Complaints
13 and arrests increased dramatically during 1974 and
14 1975 at a rate far in excess of the increase in popu-
15 lation. With steady increases in larcenies, drunken
16 disturbances and alcohol-related offences. Both
17 prostitution and gambling activity existed in the
18 community over the period, but both have been con-
19 tained I guess to some degree with as little publicity
20 as possible.

21 In order to finance
22 the necessary expansion in community services, the
23 Valdez City Budget has increased dramatically, from
24 \$586,000 in fiscal years '73-'74 to over 20 million
25 in 1975-76. One half of this 20 million budget is
26 for a new school construction, a bond issue.
27 Revenues have been obtained from various sources,
28 Following the passage of legislation in the 1974
29 session that gave to the state the right of taxation
30 over the petroleum industry and local capital invest-

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In Chief

1 ments. Valdez became dependent upon state impact
2 monies for the financing of major community projects.
3 The total of 3.6 million impact funds has been received
4 from the state up to the end of the state impact aid
5 program in July 1976. Of this, 2 million dollars
6 was received as a block grant and utilized for ex-
7 pansion of the police department and other city services
8 and for the city's share in the costs of an expanded
9 sewer system. 1.6 million has been received in dis-
10 cretionary grants from special impact legislation
11 passed by the '74 legislature, and this was used
12 primarily for the purchase of school modulars and
13 other school expenses, temporary camper facilities,
14 and for city expenses incurred in taking over the
15 general wing of the state hospital. The fact that
16 none of these state monies were received until after
17 construction began, obviously prevented efforts to
18 defray impacts in an anticipatory manner. In actuality
19 considerable delays were involved in the delineation
20 and initiation of projects, once these funds were
21 received by the city.

22 In addition to state
23 impact monies, the sale of bonds and local taxation
24 has been used by the city to raise revenues. In
25 1974 and 1975, bond issues were passed for the con-
26 struction of new elementary and secondary schools.
27 A third proposal to sell bonds to raise revenues for
28 loans to Alyeska for construction of the terminal
29 facilities was approved by voters, but has not received
30 legal sanction. Finally increased revenues were

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In Chief

1 obtained through continuation of a city sales tax and
2 property taxes, whose assessed valuation increased from
3 slightly over 1 million in 1974 to a projected 4.3
4 million in 1976. Mill rates for property taxes
5 ranged from 10 to 15 mills depending on tax zones
6 throughout the first two years of impact. By the
7 spring of 1976, the financial situation of Valdez
8 had improved to the point where the city sales tax
9 and water and sewer fees were discontinued, and a
10 constant mill rate generated more than four times the
11 1974 revenues. Ninety percent of this tax burden
12 was borne by the assessed value on Alyeska's terminal
13 facility, and are quite right.

14 Insufficient data was
15 collected to evaluate effectively the influences of
16 pipeline construction in creating human stress, and
17 the psychological effects which this might have had.
18 However, certain indications of stress exist in the
19 community. Between 1974 and 1975 the divorce rate
20 among the panel which we interviewed increased from
21 under 7 percent to 11 percent, an increase in part
22 was caused by married families leaving Valdez while
23 more divorced and single people stayed.

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In Chief

During the year that Marsha resided in Valdez there were also at least two suicides, an alcohol-related death, and 11 possible heart attacks. There was also a sharp increase in ambulance rescue squad calls in 1975, particularly those concerned with stress-related incidents. Alcohol-related crimes also increased significantly as did crimes of violence, including the rape of a young police dispatcher taken from the Police Station. Although data is lacking to document this, there was certainly a higher frequency of fights and arguments, many but not all belonging to construction and pipeline workers.

Already mentioned was the tendency of Valdez residents to react to the increased pressures and stress of impact by retreating into the confines of the family and private activities. In spite of the obviously beneficial influence which this may have, this transfer of pressures created by crowding and increased public responsibility is not without costs. Although the numbers were small, twice as many of the panel respondents mentioned increased marital conflict when compared with newer residents.

In addition, the significant emigration of 17% of our original sample out of Valdez during the first year of impact constituted a significant loss for the community, particularly since various of these individuals were very important community leaders. Although various factors contributed toward decisions to leave Valdez, changes in

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1 the community and negative aspects of impact were
2 instrumental factors in a number of known decisions.

3 No significant special impacts
4 have been noted in the native community of Valdez due
5 to their low levels of distinct cultural activity and
6 strong acculturation into the dominantly white commun-
7 ity. In addition, this population of natives is
8 small and with the increase in size of the community
9 becoming proportionately smaller, from 16% in 1970 to
10 less than 5% in 1975. Under the Native Land Claims
11 Settlement Act each individual enrollee living in
12 Valdez has received approximately \$2,000 since 1973,
13 as their payment in lieu of a land settlement. Since
14 Valdez is a first-class city with boundaries that
15 encompassed the terminal site and pipeline corridor
16 prior to enactment of the Settlement Act, land selec-
17 tions by the Chugach region, which includes the
18 Valdez area natives, could not include part of the
19 pipeline corridor as was possible in the Ahtna region
20 north of Valdez.

21 The Chugach Native Corporation,
22 the profit-making arm of the native region, has had
23 three long-term and one short-term minority sub-
24 contracts at the terminal site for a total of approxi-
25 mately \$3½ million. These include a manual labor site
26 preparation contract, an oil spill contingency program,
27 a weather boat at the Valdez Narrows, and short-term
28 barge transport in early 1974 before the road link bet-
29 ween Vandez and the terminal site was completed. These
30 contracts have provided employment for Valdez natives;

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1 it is estimated that almost every native family now
2 has a pipeline worker, whereas formerly many were
3 unemployed or fished for very low wages. On the other
4 hand, Valdez natives represent a very small group
5 within the larger Chugach region, and no significant
6 programs of economic or social development have been
7 initiated as in other communities of the state. As a
8 result, Valdez natives have had to confront the
9 impact of the pipeline including employment, on a
10 largely individual basis similar to most members of the
11 white community. At the same time, mention of racial
12 antagonisms or negative aspects of impact on natives
13 in Valdez have been totally lacking from our inter-
14 views in Valdez. Although natives in the community are
15 entitled to medical and health benefits through
16 various federal programs, indications are that those
17 natives enrolled in the Labor Unions are placing
18 increased reliance on these agencies, on the labor
19 agencies as sources of personal benefits instead of
20 the federal agencies.

21 Finally, questions have
22 inevitably been raised concerning the influence of
23 construction and the pipeline on the physical environ-
24 ment. To the vast majority of Valdez residents these
25 have not or do not pose significant problems. Less
26 than 20% of the population that we interviewed, for
27 example, viewed air, noise or water pollution as
28 constituting serious problems in Valdez. Although
29 larger percentages considered crowding, the over-use
30 of recreational facilities and litter to be serious,

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1 in none of these cases did this constitute a majority
2 of those interviewed. Although environmental concerns
3 may become relevant for Valdez residents in the future,
4 they are not so at present.

5 In spite of the acute
6 problems and many inconveniences associated with impact,
7 a generally high level of satisfaction exists among
8 Valdezians on the changes and progress which the
9 community has made. Among our sample of former residents,
10 only one-third felt that the changes were worse than
11 they had anticipated; over 40% expressed satisfaction
12 with the developments to date, and almost 25% that
13 the community had progressed in better terms than anti-
14 cipated. A strong degree of consensus existed on the
15 future of Valdez. Even in the height of impact, only
16 a very small minority (some 13%) would want to turn
17 back the clock and be rid of the pipeline altogether,
18 a number almost as small as those who view the
19 current situation of impact and boom to be desirable
20 in itself. The vast majority of older Valdez
21 residents consider the overall changes as desirable,
22 while at the same time they recognize the need for
23 a more permanent population with greater breadth and
24 stability in the growth of their town.

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In Chief

1 To a surprising degree,
2 Valdezians reflect a typical quandry of those who are
3 in favor of continued growth, but who at the same time
4 fear for the traditional values being lost and costs
5 invoked in the development process. There is but little
6 doubt that the average Valdezian bears a significant
7 commitment to continued growth.

8 This may, in part, reflect
9 acceptance of an inevitable process over which Valdez
10 has little control. More likely it is a response to
11 the previously lost opportunities for economic benefit,
12 and the recognition that the present situation is a
13 rare opportunity which the community cannot afford to
14 ignore. Boom towns also become easily addicted to
15 growth. They attract new residents with vested interests
16 in maintaining the high rate of development. In Valdez,
17 this can be seen in the active commitment toward the
18 El Paso proposal for an all Alaska gas pipeline that
19 they would also like to see routed through Valdez.

20 However, even a majority of
21 our old sample respondents favor continued development
22 of the oil industry in Valdez, a rather significant
23 finding since few are directly employed in the industry
24 and virtually all are affected by the adverse aspects
25 of impact. On the other hand, a majority also state
26 their opposition or resignation to the changes that
27 are currently occurring in the state, and they are
28 concerned with the loss of friendliness and cooperation
29 among people, and the increased crowding and population
30 density.

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These constitute the same factors that residents claim would make them move away from Valdez and the actual exodus of those from the community who cherish these values may well explain much of the lack of organized opposition to growth, and particularly petroleum development. On the other hand, economic well-being and jobs and the greater availability of new facilities and community services for the benefits which residents feel they derive from development. In the final trade-off, most Valdezians are willing to accept these benefits, for any of the short and long-term costs which they may entail.

In spite of their willingness to trade some important values in the short run for long-term economic stability, these same values still influence their attitude toward the future development of Valdez; whereas sixty-five percent of the old samples favor further oil development in their community, even more favor expansion of the Port of Valdez, indicating strong support for expansion of the traditional economy and culture. Newer residents fail to discriminate between these alternatives, favoring both equally. Similarly, the average Valdezian would like to see his town have an optimal population of just over three thousand people, actually less than existed at the time that they were interviewed.

Valdez residents do not anticipate their community becoming a large, urban industrial center, but one which combines the optimum

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1 of small size with a high standard of economic well-
2 being. This attitude also reflects upon the
3 adaptability of Valdez residents. Many of the major
4 changes such as going to work on the pipeline have
5 been avoided and personal lifestyles have been marginally
6 changed in order to accommodate the pressure points
7 within the community.

8 Individuals have less leisure
9 time, for example, or change their eating and drinking
10 habits based on crowding or prices in bars and
11 restaurants; but friendships and associations remain
12 the same and basic lifestyle patterns are not greatly
13 altered. The main thread of these traditional values
14 can be seen in positive answers to value questions
15 concerning the small town, and a way of life which they
16 are strongly interested in maintaining.

17 On the other hand, one must
18 seriously question whether retention of traditional
19 lifestyles is consistent with the active energies that
20 would be required to create changes of a desirable
21 nature. There are several areas of the Valdez economy
22 that might be developed to augment oil development and
23 provide local employment, but these will depend largely
24 on decisions that are already made or currently being
25 made by the community. For example, although many in
26 Valdez favor development of an expanded tourist industry,
27 tourism in itself is not consistent with the community
28 in which over fifty percent of the residents are housed
29 in temporary dwellings, where industrial use dominates
30 the waterfront, or even a majority of residents agree

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1 that recreational facilities are very inadequate.

2 At the present time, older
3 Valdezians constitute a numerical minority within their
4 own community, and the highly active and forward-
5 looking citizenry will be required if they are to
6 determine the direction which future change will take.
7 Adaptation to impact by withdrawal to conventional
8 traditions may be absolutely necessary in the short
9 run and preservative in nature. However, it will not
10 provide the influence necessary for the direction of
11 steering and change, particularly if the ailments of
12 many standard industrial towns are to be avoided.

13 Valdez has been fortunate
14 in having successfully negotiated the early euphoric
15 period of pre-impact and that stage where decisions
16 and actions had to be taken to cope with temporary
17 crisis needs. It now appears to have initiated a more
18 difficult stage of rational long-term planning that
19 will permanently affect the type of community which
20 Valdez is to be. It enters this stage in a relatively
21 secure financial position and with elements about old
22 and new leadership that is capable of making the
23 difficult decisions that will be necessary if qualities
24 of the former town are to be preserved. These decisions
25 will be contingent upon the development of a more active
26 community.

27 Finally, the lessons that other
28 communities may learn from Valdez's experience with
29 impact are many. It is not our intention here to fully
30 list or expound upon them all. However, we would like

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1 to mention a few important social conclusions which
2 we have noted both with reference to the Valdez case,
3 and from our observation on Valdez in the context
4 of other Alaskan coastal communities that are confronted
5 with impact from petroleum development.

6 1. The economic boom in
7 rapid population growth that is attributed to pipeline
8 construction has caused serious short-term dislocations
9 within the community, most particularly in the areas
10 of housing and public utilities.

11 2. In spite of great
12 pressures and requirements for change, institutions
13 within the Valdez community have shown themselves
14 capable of accommodating a large influx of population
15 without the occurrence of social problems which are
16 beyond the ability of the community to handle. Several
17 specific factors may have attributed to this
18 accommodation which may not be typical of other
19 communities in Alaska. First, a relatively elaborate
20 service and institutional infrastructure existed in
21 Valdez prior to impact and more importantly, a relatively
22 high level of sophistication and technical expertise
23 existed among the general public and particular community
24 leaders.

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1 Secondly, the overall attitude
2 of the community toward pipeline construction was
3 positive. Valdez did not experience organized
4 opposition to petroleum development which might have
5 served to polarize issues and paralyze the necessary
6 expansion of services.

7 Thirdly, no radical departure
8 occurred in traditional lifestyles or the operation of
9 dominant institutions. Relatively little turnover took
10 place in the personnel holding leadership positions
11 in key organizations, throughout the impact period,
12 and major policy changes were neither contemplated or
13 instituted. More dramatic impacts might have occurred
14 if major institutional or program changes had been
15 attempted.

16 Fourth, state impact monies
17 were made available during the impact period to provide
18 for the development of various key services and
19 staffing needs.

20 3. To a large extent the pipeline construction has
21 not drastically or immediately affected the lifestyles
22 of older Valdez residents, but actually has served over
23 the short run to reinforce these values and lifestyles.
24 Although a certain number of former residents may have
25 left Valdez and others sold businesses rather than
26 adapt to a more rapidly changing economy, these also
27 reflect accommodations to preserve traditional life-
28 styles. Although new groups in the community may
29 reflect very different lifestyles and behaviours,
30 these have not over the short run replaced or destroyed

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1 traditional values and relationships.

2 4. The fact that most of the transient population
3 in Valdez has been housed separately in self-confined
4 construction camps outside of town has greatly
5 reduced the strain on most Valdez institutions and
6 services.

7 5. Similar to the construction camps, the self-
8 confined location of housing for professional and
9 management families has served to separate them
10 from the Valdez community. In contrast to the
11 construction camps, however, these new residents with
12 their families place an additional demand on city
13 services. Although open animosities between them and
14 the older Valdez community have been minimized, they
15 still exist and the two groups act as two distinct
16 sub-systems within the larger community. Many Valdez-
17 ians would support a more integrated housing
18 pattern which encouraged greater interaction and co-
19 operation between these groups in order to reduce
20 the current divisiveness.

21 6. Assumptions behind population projections must
22 be carefully scrutinized in each individual community.
23 Different public policies may have a strong influence
24 in determining or changing the expected amount of
25 population growth. In Valdez, for example, lack of
26 both housing and the physical infrastructure to
27 support more housing not only created hardships for
28 incoming migrants, but probably discouraged the popula-
29 tion growth that would have occurred otherwise.

30 What I'm saying is that the population projection offered

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1 in impact statements in the case of Valdez were very
2 erroneous and shouldn't be trusted.

3 7. There is a definite need for state and federal
4 agencies to facilitate planning in communities prior
5 to the actual occurrence of impact, and to streamline
6 regulations to accommodate acute impact needs. In
7 the case of Valdez, services should have received
8 anticipatory funding based on the projected demand
9 for needed services in order to prevent the disruption
10 of these. Of particular importance is the absolute
11 necessity for establishment of a funding policy to
12 subsidize local planning prior to impact.

13 Included among these, I think, also is an absolute
14 need for the community to have full knowledge and
15 control over the resources which it holds, including
16 its land.

17 8. Communities that are subject to impact must be
18 encouraged and supported to develop short-term plans
19 for the impact period, as distinct from long-term
20 plans. Unless short-term and long-term planning is
21 clearly distinguished and then co-ordinated, the poli-
22 tical pressures stemming from impact will demand the
23 compromising of any long-term planning efforts. In
24 the case of Valdez, zoning regulations based on a former
25 comprehensive plan frequently had to be sacrificed in
26 order to meet acute housing needs. Where not sacri-
27 ficed, they frequently served as impediments to the
28 establishment of needed temporary facilities. If
29 specific short-term planning for the temporary boom
30 is co-ordinated with long-term plans for the permanent

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1 development of a community, strains in the community
2 will be reduced and the opportunity for realizing
3 long-term plans enhanced.

4 9. Federal environmental impact assessments such as
5 that prepared for the Trans-Alaska Pipeline, provide
6 only minimal information that can be used by individual
7 communities for planning. Either federal guidelines
8 must be changed or the state should assume the
9 responsibility of preparing impact statements with
10 maximum participation from local communities. Such
11 studies must serve to integrate impact analysis with
12 actual planning needs. Information must be collected
13 and analyzed in the impact assessments in such a way
14 that it forms a basis on which local planning and
15 decision-making can be developed.

16 10. As part of the early planning process for
17 prospectively impacted communities, the communities
18 should be encouraged to develop alternative proposals
19 and sites for their industrial development. The general
20 euphoria that existed in Valdez at the time of the
21 pipeline -- at the time the pipeline was initiated
22 precluded any hard analysis or decision on the
23 directions which local development would take. As a
24 result, decisions had to be made after the process of
25 change had already been initiated. If communities
26 do initiate preliminary and alternative proposals
27 to local development, both public awareness and the
28 later collection of more specific information will be
29 facilitated. This would substantially assist both
30 local planning and decision-making.

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11. Greater specification of plans must be required of all impacting industries, with the requirement that they supply the community before impact with all necessary information on the various types of community services which they will require during all phases of exploration, development and production. School needs is one obvious requirement. The needs in the area of housing, utilities, recreation, and other basic services should also be estimated and given to the community for planning purposes. Often the private sector is poorly informed about potential demand until faced with overload. Both city, state and impacting industry could provide more information to local businesses and services to help anticipate growth before it actually occurs.

12. Lack of housing may constitute one of the most important impact problems in small coastal communities. It was the most important single issue in Valdez. It caused distinct hardships for many; it created problems for supplemental staffing of local services; it created animosities between groups with differential access to adequate housing; it generated high personnel turnover in key medical and educational services, and therefore affected the continuity of these services; and the reliance on temporary dwellings and trailers has probably shaped the housing patterns that will predominate in Valdez for the foreseeable future. Skyrocketing land values and the inflationary construction wages have elevated housing costs to levels that greatly supersede conventional mortgage

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1 ceilings. In addition, banks in Valdez were
2 unwilling to amortize loans over conventional long-
3 term periods. The result is the construction of new
4 and permanent housing has become a luxury available
5 only to the very few. We recommend that a state program
6 be developed in Alaska whereby monies from oil revenues
7 are made available to private banks and individuals
8 in order to supplement conventional mortgage loans
9 for permanent housing construction.

10 13. It should also be recognized that the ability of
11 a small community to raise revenues through taxation
12 will only be fully realized late in the impact period
13 when the assessed values on these properties reach
14 their peak. Federal and state funding policies should
15 assist these communities in this dilemma. They will
16 or should -- this is the federal and state govern-
17 ments -- should or will have to absorb a larger ratio
18 of expenses for infrastructure during the pre or
19 early stages of impact, with the community absorbing an
20 increasing ratio during the later stages when local
21 assessments and revenues have risen.

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14. Communities should not underestimate the facilities and resources which develop in industries can provide for meeting new community needs. In the case of Valdez, Alyeska Pipeline Service Company has provided considerable emergency help to the community, and has also provided valuable resources to the community in terms of school teachers, new members of City Council and other leadership personnel. On the other hand, Alyeska as a corporation has been somewhat reluctant to support efforts which would permanently improve conditions or facilities in Valdez, an act which many feel it is not the obligation of an industry to perform.

In summary, Valdez has responded well during the first two years of impact, in a direction which is consistent with basis public attitudes and objectives toward continued growth. Stricter adherence to many of the recommendations outlined above would have facilitated this process, and prevented many of the hardships incurred and incurring during impact. The preservation of these traditional attitudes and lifestyles which have been observed during the first two years of impact, however, should not be assumed to constitute a final result of impact. The impact of the pipeline is a continuous process, and the short-term changes that have been described may be largely transitory. As Valdez confronts future issues, such as a gas line, post impact slump or the achievement of a more stable economy, future changes will be inevitable in the life

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of Valdez, and I guess that's our written testimony.

THE COMMISSIONER: Back to page 36, I missed this -- you said that there is a tendency to see that further growth is for the good of the town, once it has gotten this first project under its belt. You refer to the El Paso proposal and Omar. What's Omar again? Maybe you can explain that to me.

WITNESS BENNETT:
organization for management of Alaska's resources. It's a consortium of individuals both in oil industry and out who've been promoting the El Paso proposal. Valdez put up \$25,000.00 in support of that.

THE COMMISSIONER: So it's the same thing as the El Paso proposal?

WITNESS BARING-GOULD: Yes, it's a public interest group pushing the El Paso proposal and part of its funding comes from the Valdez City Council.

MR. GOUDGE: Thank you very much Professor Baring-Gould. Sir, this panel is available for cross-examination and I'd ask Mr. Sigler, Association of Municipalities to lead off.

CROSS-EXAMINATION BY MR. SIGLER:

I wonder if you'd have any specific recommendations tonite for, say, the community of Valdez, with respect to how to deal with a post construction slump, or how to plan for that eventuality? What are they doing now or what would you recommend that they do now?

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1 WITNESS BENNETT: There are
2 several steps that the community of Valdez could
3 take that, some of which they're taking, They're
4 promoting tourism by the introduction of a new
5 brochure. There is a proposal for a refinery, an
6 oil refinery that is being circulated in Valdez.
7 There are other proposals that are presently being
8 discussed in Valdez, although this certain amount of
9 scepticism as to what effect that will have. Most
10 of the pipeline suppliers have left Valdez now and
11 the town is reducing in size as the terminal camp
12 construction continues, but local construction is
13 virtually at a standstill at this point, so I think
14 there's very little doubt that there will be a slump
15 and that the actual local economy is now on the verge
16 of it and that when it comes down to it, there's very
17 little that the community can do to avoid that. And
18 so, at this time, there's a considerable effort on
19 the part of the local community members who want to
20 maintain residence there, to tie down the jobs and
21 the businesses for themselves. As far as avoiding that
22 I think Valdez has been quite conservative in their
23 building programs, so that perhaps they won't exper-
24 ience quite the -- quite the vacancy rate in buildings
25 that was experienced in Kenai for example after the
26 oil boom in -- on the Kenai Peninsula, but, it would
27 seem to me that it's a pretty inevitable process at
28 this point.

29 MR. BARING-GOULD: Part of
30 the answer to that, as she stated, is that -- really

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Cr-Exam by Sigler

1 nothing is being done. If they're doing anything,
2 they're looking for more industry, like looking for a
3 gasline.

4 WITNESS BENNETT: Right

5 WITNESS BARING GOULD: But actually
6 not much planning is done on how to deal with the
7 slump when it comes.

8 MR. SIGLER: So the community
9 isn't accepting that as a possibility?

10 A : I guess
'11 it hopes it won't.

12 WITNESS BENNETT: There's a
13 double response. On the one hand, everyone, every-
14 one is tying down jobs and securing their own future.
15 In fact, a number of -- in our report we say, that
16 the pipeline jobs were not chosen by the local Valdez
17 residents. In fact, in the last year or so, a number
18 of housewives of regular workers, you know, wives
19 have worked on the pipeline as an attempt to up their
20 income in the short terms so that they can tie them-
21 selves over for a longer period of time in anticipation
22 of a slump, but I think most people are facing the
23 slump and realizing that that's going to cut into
24 their -- into the community and effect them in the
25 long term.

26 Q Has the municipality
27 itself incurred a large debt load, that could pose
28 financial problems for it, if there was a slump?

29 A No, in fact, the assessed
30 valuation of the terminal site is so substantial that

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Cr-Exam by Sigler

1 that property tax is going to be the only means of
2 taxation. They've eliminated a sales tax and sewer
3 and water tax and assessed valuations is already --
4 I can give you the figures if you're interested.
5 Financially Valdez is not as a municipality, is not
6 in serious condition. In fact, it's very, very
7 healthy.

8 Q Because of the terminal?

9 A Because of the terminal
10 site assessed valuations, it's much better off than
11 other coastal community in Alaska.

12 Q Are there any other
13 postal communities that have incurred a high impact
14 that would be in trouble when the slump occurs?

15 A Oh, definitely. I think
16 Valdez is very A typical in this sense, because a
17 number of other communities that will be experiencing
18 O.C.S. Development are in a very different financial
19 condition. For example, the Kenai experienced --
20 the city of Kenai experienced rapid growth and energy
21 developments, but the city limits of Kenai didn't
22 encompass the oil development, and so in fact, they
23 were providing services, but they weren't reaping
24 any of the tax benefits. The city of Valdez has a
25 huge city limits and therefore even though the con-
26 struction is at some distance from the town itself,
27 it's still maintains taxable authority over that
28 industrial development, wherein most other communities
29 with very small city limits, that isn't possible.

30 Q And the revenues then

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1 go to the state?

2 A They would go to the --
3 in the case of the City of Kenai, they've gone to the
4 Borough and so school expansion borough wide has been a
5 benefit to the whole /Borough but the City of Kenai has
6 paid dearly for oil development and hasn't reaped
7 the benefits that Valdez could potentially. I think
8 Valdez is in a state of shock at this point and
9 municipally it's quite conservative as far as expendi-
10 ture of revenues but perhaps over the long term, as
11 this withdrawal stratagy dissipates and more of a
12 feeling of active promoting and active confronting
13 of issues that are -- that have been left in the coping
14 process of housing and other problems will take place.

15 Q Thank you. Those are
16 all the questions I have.

17 THE COMMISSIONER: Just one
18 thing. Over the long term, if there was no El Paso
19 Gas Pipeline, over the long term, Valdez's financial
20 position will be secured in some measure by the fact
21 that you've got that terminal there as the basis for
22 a local property tax revenue that -- that isn't en-
23 joyed by any other local taxing authority except the
24 North Slope Borough which has the Prudhoe Bay facilities.

25 But everybody in between just has this pipeline
26 which is by no means the same thing as that huge
27 terminal you've got or the facilities on the north
28 slope.

29 A Well in the Ahtna region
30 on the other hand, there was a much more active in-

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Cr-Exam by Sigler

1 volvement in the construction phase and so the benefits
2 could in that period and also each of the pump stations
3 will -- will generate higher assessed valuations in
4 those areas as well.

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Cross-Exam by Sidler

1 Q No, I'm talking about
2 the future basis of property tax value.

3 A Right. Right.

4 Q The Ahtna region
5 apart from the pumping stations, is Northern Capital
6 Installation. Sorry, Professor.

7 A Right. That's right.

8 WITNESS BARING-GOULD: No,
9 an added point in terms of the slump I think too is
10 that, and costs for expenditures related to these
11 that should be kept in mind in the case of Valdez, that
12 it has excellent communications with Anchorage and
13 outside so that many of the unemployed people who would
14 be left in the community, people unable to find jobs,
15 et cetera, will very quickly leave the community.
16 This has definitely been the trend in the past when
17 transient workers arrived in Valdez and couldn't find
18 jobs. They stayed for very short periods of time
19 before leaving for Anchorage and other communities.

20 So, many of the costs for
21 providing social services aren't borne by the local
22 communities because of the communication.

23 Q And that terminal, we've
24 been told, is a multi-billion dollar installation.
25 In fact, it's one of the chief factors in the escalation
26 of the cost of the project itself. That is, the cost
27 of that terminal was grossly underestimated. Is that
28 a fair comment?

29 A Yes.

30 WITNESS BENNETT: Yes.

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Cross-Exam by Bayly

1 WITNESS BARING-GOULD: And
2 the whole pipeline.

3 Q Thank you, Mr. Sigler.

4 MR. GOUDGE: Mr. Veale for the
5 Council of Yukon Indians?

6 MR. VEALE.: No questions.

7 MR. GOUDGE: Mr. Bayly for
8 the Original People's Entitlement?

9 CROSS-EXAMINATION BY MR. BAYLY:

10 Q You said in answer to
11 Mr. Sigler's question that Valdez was in many ways
12 unique and I take it that that has to do with more
13 things than just the municipal boundaries being quite
14 large. The effect of the earthquake, as we saw in
15 the film, was something which had upset the community
16 in the first instance.

17 Can you tell me, is there
18 any information on how many people moved out at the
19 time following the earthquake? What percentage of
20 the population moved on to other areas?

21 A I don't think that's
22 known but it was sizeable.

23 WITNESS BENNETT: I believe
24 from my conversations with people about the history
25 of Valdez that about thirty percent of the population
26 left permanently and so you were left with about sixty
27 percent of the original population which was in the
28 neighbourhood of five hundred in population. It was
29 really a small village.

30 Q Five hundred was the

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Cross-Exam by Bayly

1 total population?

2 A Right. At about 1964
3 it was right around 500 and about thirty percent of
4 those left and didn't return. So, then the population
5 didn't really increase until around 1970 in anticipation
6 of the pipeline's development.

7 Q All right. And when you
8 talk about the sixteen percent who moved on during the
9 build-up to and the construction of the terminal
10 facilities and the pipeline close by, sixteen percent
11 of what number?

12 WITNESS BARING-GOULD: We're
13 talking about those whom we'd interviewed the year
14 before.

15 Q So, this was--

16 A A few months before impact
17 began, sixteen percent of those people had had left in
18 the year.

19 Q All right. And by that
20 time, when you first interviewed, what was the
21 population?

22 A 1,350.

23 Q All right. So, from
24 '64 to when you did your interviews, approximately
25 ten years later there were--there had been an increase
26 in population of probably a thousand.

27 A That's correct.

28 WITNESS BENNETT: That's
29 correct.

30 Q And of those people,

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Cross-Exam by Bayly

1 sixteen percent moved on during the intervening year?

2 WITNESS BARING-GOULD: Yes.

3 It was up to a thousand. The population went from
4 five hundred in 1950 to a thousand in 1970. So, okay,
5 it dropped down to three or four hundred after the
6 earthquake and then in '68, '69, it rose up in
7 anticipation of the pipeline to a thousand and then
8 increased another three hundred people up to '74.

9 Q Now, this is a relative
10 term but when we're dealing then with old-timers in
11 Valdez, we're dealing with people who we think of as
12 at least having been there after the earthquake and
13 before the build-up to the construction of the pipeline
14 or do we include those that came in in the first wave?

15 A Old-timers in Valdez,
16 by definition, are people who lived there before the
17 earthquake.

18 THE COMMISSIONER: Before
19 what?

20 A Before the earthquake.

21 THE COMMISSIONER: Oh, yes.

22 MR. BAYLY: All right. When
23 you talk about withdrawal of people who had been in
24 Valdez before, from certain areas of social activity
25 and interaction, are you talking about the ones that
26 were there before the earthquake or are you talking
27 about the ones who were there when you first did your
28 s survey?

29 A When we first did our
30 survey.

Baring-Gould, Bennett
Cross-Exam by Bayly

1 Q So, they would be relative
2 old-timers only and not by definition.

3 A Yes, that word is confusing
4 in the report. We talk about our old sample. Those
5 were the people whom we interviewed.

6 Q All right. So, even of
7 those, a certain percentage withdrew from certain kinds
8 of activity and kept pretty much to themselves?

9 A Umm-hmm.

10 Q And it's these people
11 that you talk about being in the state of shock, if
12 I can use your words, that you expect they will come
13 out of as things begin to settle down a bit?

14 WITNESS BENNETT: Well, at the
15 present time, there's been such a high level of
16 transiency in the community, both in the sense of
17 workers coming in and out and working at the terminal
18 camp, workers and their families living in camp
19 trailers and in boats and other temporary facilities
20 over the short term and working maybe a few months for
21 the high wages and then moving on. This is really
22 under-estimated in our statistics because in the
23 process of surveying, you don't pick up some of these
24 highly transient people. There's been a tremendous
25 flow of people through Valdez over the last few years
26 and this has been a very unstable element within the
27 community.

28 In addition, there's the
29 Alyeska and Fluor families who have lived in a compound
30 status within the community but somewhat removed from

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Cross-Exam by Bayly

1 the central focus of the social life of the community
2 and have maintained a distance because they were only
3 say two year residents in the town. They didn't have
4 a commitment to the community. They didn't have a
5 sense that they were long-term residents. As the
6 town changes, it already has begun to change as a
7 few oil families have come in as more permanent
8 residents with administrative responsibility for the
9 completed terminal site facility. These people are
10 taking a much more active part in the social and
11 political life of the community and have tried the
12 members of council and of the school board who are
13 the relatively new but permanent oil families have
14 tried to spur people.

15 John Emmert, in the film, the
16 Minister, was one who talked about the fragmentation
17 of the community and he was one of the people who left
18 the community and his leaving was a real loss because
19 he was very active in various social organizations
20 dealing with mental health, with alcoholism and other
21 related issues. There was an almost total turnover
22 of personnel in social welfare related fields during
23 the period and partly because people were not well
24 housed and partly because they burned out in dealing
25 with the problems that they had to confront.

26 So, right now there is a
27 period of shock and a period of transition and no one
28 is quite sure just exactly how the old-timers and the
29 newcomers will integrate or become part of a single
30 community, but it hasn't happened yet. The animosities

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Cross-Exam by Bayly

1 are still--and the distances and the transiency are
2 still preventing the formation of any kind of consensus.
3 There's a pulling away of some political participation,
4 a lack of voting that's quite noticeable and a lack of
5 activity politically that formerly wasn't the case and
6 that will probably take some time before it changes.
7
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Baring-Gould, Bennett
Cross-Exam by Bayly

1 Q Is that something that
2 you think either has been avoided in other
3 communities in Alaska that weren't in the situation
4 that Valdez was as being a very upset community
5 because of the earthquake and other things in other
6 communities that have been done to cushion this
7 impact from having a large number of newcomers come
8 in and having the old population withdraw from
9 certain activities and the people and certain other
10 ones to the exclusion, perhaps, of the newcomers
11 such as the political structures?

12 WITNESS BARING-GOULD:

13 I'm not sure of your
14 question. I think the only case where this has happened
15 has been the case of Yakutat, and drilling in the Gulf
16 of Alaska, outer continental shelf drilling where
17 Yakutat has definitely had its sort of land situation
18 organized and has been able to negotiate very speci-
19 fically with the oil companies where they put their
20 facilities, the controlling of the location of those
21 facilities, controlling the amount of interaction
22 that will exist with the town, it probably will be
23 sort of able to mitigate impacts as a result of doing
24 this.

25 Q Now, Valdez as well
26 as its uniqueness, as I understand, did not represent
27 a metropolis with a hinterland of smaller communities
28 which depended on it for either supplies or enter-
29 tainment or education. Am I correct in that?

30 A Correct.

Q And in fact there are

Baring-Gould, Bennett
Cross-Exam by Bayly

1 certain communities where the opposite is true.

2 I understand Glenallen is a community that acted as
3 a local centre, and do you know about the impacts as
4 they related to Glenallen's being a centre of activity
5 for other smaller communities?

6 WITNESS BENNETT: My impression
7 of the Glenallen case is that there have been more
8 open disagreements and fights and bar fights between
9 townspeople and camp workers, as a result of more
10 independent transportation from the camps feeding into
11 the Glenallen case. In the case of Valdez, most of the
12 camp workers were transported by bus and were more or
13 less highly localized and segregated from the community
14 itself, and I think that has had a better effect.
15 There has been a lot of bar fighting and obnoxious
16 behaviour in the bars, but the bars that the camp
17 workers have frequented have tended to be either there's
18 one or two at the airport and that is somewhat
19 removed from houses downtown, and the others are
20 located at the harbour area, and that too in the
21 Valdez case has tended to permit people the luxury
22 of ignorance.

23 In Glenallen, Glenallen's
24 bars and restaurants are right in the downtown area
25 and also the Community of Glenallen is unincorporated
26 which has an unknown effect on its ability to respond.
27 I think that -- and there's more of a religious
28 commitment and stronger religious content to the
29 culture in Glenallen as well, so that bar behaviour
30 is probably more condemned there than it is in Valdez.

Baring-Gould, Bennett
Cross-Exam by Bayly

1 WITNESS BARING-GOULD: I

2 think the context of your question, Glenallen draws
3 people from a wider area, people who are basically
4 maybe not involved with the pipeline, and draws the
5 men to the few services in Glenallen, and here they
6 come into contact with pipeline workers, is true as
7 compared to Valdez. Valdez didn't service other
8 areas, didn't draw people into the bars and things
9 like this who weren't directly involved in Valdez
10 or the pipeline itself.

11 Q Can Valdez, and has it
12 been able to cope with all the social casualties that
13 there have been, or have they been dealt with by other
14 communities?

15 A They've mostly gone
16 to Anchorage.

17 Q Is there any way of
18 assessing the number of people who have developed, if
19 you like, their social problems in the Valdez area
20 and been forced to Anchorage for the solution?

21 WITNESS BENNETT: I would
22 say almost one of the characteristics of drinking
23 behaviour in the camp situation is that anyone with
24 an alcohol problem is immediately terminated and
25 shipped out. What happens is he usually vomits on
26 the bus going up to Anchorage and is then, you know,
27 taken care of out of the Anchorage -- or left to
28 essentially flounder on 4th Avenue in Anchorage
29 without any attempt to deal with the problem in the
30 Valdez situation. A person was hired by the oil

Baring-Gould, Bennett
Cross-Exam by Bayly

1 companies to take care of alcohol-related problems
2 in Valdez, but the problem -- the solution didn't fit
3 the problem in the sense that what little social
4 services were provided for alcohol or alcohol-related
5 occurrences in the camps were basically volunteer in
6 the sense of A.A.-related therapy groups, and beyond
7 that the social service itself was almost totally
8 unused because people were terminated with alcohol
9 problems and shipped out to Anchorage and left to
10 flounder. I really think in the case of Valdez there
11 has been a total mis-match of social services and
12 alcohol and other related social problems that
13 haven't really dealt with the problem at all. I think
14 there is a tremendous amount of tranquilizer use
15 and drug use both at the camp and in the community
16 of Valdez, but it tends to be ignored by the social
17 services rather than being dealt with. But as far as
18 getting adequate statistics on this, it's rather
19 difficult and we haven't really been able to establish
20 indices of alcohol and drug-related occurrences or
21 other mental health measures.

22 WITNESS BARING-GOULD: During
23 the first summer I had a couple of students work during
24 the summer in Valdez, and they estimated around 700
25 transients came into the community looking for work,
26 which was lower than anticipated, actually, and that
27 the average stay in the community for those who didn't
28 obtain jobs, was seven days, in which case they
29 picked up and went in and looked for employment in
30 Anchorage or Fairbanks.

Baring-Gould, Bennett
Cross-Exam by Bayly

1 Q But in your general
2 survey, these were the people that couldn't be picked
3 up because you went in once and then didn't go back
4 in for a year, so that the ones who came in in the
5 intervening time --

6 A Yes.

7 Q -- for a period of days
8 or weeks wouldn't be picked up.

9 WITNESS BENNETT: Right,
10 that's true.

11 WITNESS BARING-GOULD: In
12 fact even when we did a census for the city in late
13 July and we wanted to interview new residents who
14 had moved into the community, we did the census in
15 late July. We drew a sample from the census and tried
16 to interview those people the first week of September
17 and we had something like 20 or 30% mortality on
18 those people who had left and we had to substitute
19 them with others.

20 Q By "mortality" you
21 mean they moved out --

22 A Moved out of the area,
23 yes.

24 Q Now, was housing a
25 real problem in Valdez, and does that account for the
26 reason that they had to move on if they couldn't get
27 a job in a few days?

28 A Housing, I think, was
29 the biggest problem. Yes, they could stay at trailer
30 parks and ordinarily they could stay at campgrounds,

Baring-Gould, Bennett
Cross-Exam by Bayly

1 things like this. Yes, they moved out because of
2 housing and extremely high cost of living. If you
3 don't have a job and you only have two or \$300 in your
4 pocket, Valdez isn't a good place to stay.

5 WITNESS BENNETT: I think other
6 communities might react differently also to transients.
7 I think that the lack of a really well integrated
8 social fabric and the general high unemployment of the
9 past made Valdez residents relatively inhospitable
10 to transients, and in fact there was very little
11 attempt made to provide any kind of temporary housing
12 for transient workers into the town. So/a camper ^{when}
13 park that was funded by the state was eventually
14 -- the funding was reduced because very little
15 attempt was made to complete it by the community.

16 WITNESS BARING-GOULD: A
17 specific organization was formed in '74 to provide
18 services for transients, to sort of set up in a very
19 short life and the people didn't participate and
20 support wasn't forthcoming from the community, groups
21 such as the Salvation Army came down from Anchorage
22 and they specifically recommended and they were con-
23 cerned with transients, and they specifically recommen-
24 ded giving the people \$15 to get to Anchorage and
25 they would provide services in Anchorage.

26 Q And what about the
27 families? I understand there were camps very close
28 to Valdez. Was it possible for the families of the
29 people working in those camps to find accommodation
30 generally in Valdez?

Baring-Gould, Bennett
Cross-Exam by Bayly

WITNESS BENNETT:

1 I would say that was
2 probably minimal. I would estimate maybe five or six
3 hundred people added to the population to represent
4 the families of workers. The Alyeska and Fluor families
5 were provided with subsidized housing and partly that
6 explains their somewhat lower immediate family income,
7 vis-a-vis the rest of the population but workers weren't
8 provided with family housing and in fact had a very
9 difficult time finding housing. So, a lot of their
10 families ended up living in Anchorage or coming down
11 in a camp trailer for a few weeks and then relocating
12 to the Anchorage area.

13 So, there was a separation
14 of families that occurred because of the housing crisis.

15 Q And of that very difficult
16 to assess in Valdez terms. They may be something that
17 only shows up in Anchorage or wherever the families
18 remigrated to.

19 A That's correct.

20 WITNESS BARING-GOULD: There
21 was one case of squatting and force evictions in
22 Valdez involving ten or fifteen people who tried to
23 squat on city property and they tried to throw them
24 off and it became a conflict. That was really the
25 only case.

26 Q Yes.

27 THE COMMISSIONER: Well, the
28 figures you gave relating to the essentially a doubling
29 of the income of heads of households and doubling of
30 household income, I think in the first instance, from

Baring-Gould, Bennett
Cross-Exam by Bayly

1 twelve to twenty-four thousand and the second from
2 sixteen to thirty thousand.

3 WITNESS BENNETT: Right.

4 Q Those increases do not
5 reflect what you might call the imputed value of
6 subsidized housing?

7 A That's correct.

8 Q If we calculated that in,
9 would it make a difference of ten percent say in those
10 latter figures?

11 WITNESS BARING-GOULD: I don't
12 think so really in that the sample of people receiving
13 subsidized housing among the Alyeska staff, that this
14 was sort of a sub group within that. So, it wouldn't
15 increase the overall--the income overall for the
16 community. Probably fifteen percent say of the community
17 was receiving subsidized housing.

18 Q So, it wouldn't affect
19 that--

20 A That figure dramatically.

21 Q Essentially you say that
22 those figures doubled in each instance would be pretty
23 well about right?

24 A Yes.

25 MR. BAYLY: Now, Valdez was
26 the center that was expecting the pipeline and was
27 planning for it and yet in the area such as housing and
28 sewage facilities, I understand that the planning was
29 for facilities that turned out to be quite inadequate.
30 Was that because of lack of knowledge of the proportions

Baring-Gould, Bennett
Cross-Exam by Bayly

1 of the project, and that they were--and that city people
2 were in the dark or was that the lack of funds that
3 you referred to coming from the state impact budget?

4 A Lack of funds. They
5 actually had predicted population growth in excess of
6 the number who came into the community.

7 Q So, had they had access
8 to the funds they could have in terms of infrastructures
9 anyway, have dealt with the physical problems of rapid
10 expansion?

11 A Yes.

12 Q Would there have been
13 more time required or was there sufficient time to
14 put in the proper size facilities and extra housing
15 if the money had been available, in your opinion?

16 A It's hard to say. There
17 could have been. I think part of the problem and
18 reason for why Valdez was not better prepared for
19 impact was that the community had geared up for impact
20 in '69 and '70 before the pipeline went into the court
21 and the people were prepared, planning was initiated
22 and the whole issue went into the court and a lot of
23 people who had begun to sort of prepare lost their
24 shirts, people making investments. There was sort of
25 several years of stagnation before anything happened,
26 and then suddenly it was okayed by the courts and it
27 was sort of go. So, it's part of that process too,
28 I think.

29 Q All right.

30 A The people weren't sort

Baring-Gould, Bennett
Cross-Exam by Bayly

1 of mentally prepared for it. The city could have
2 probably undertaken more planning than it actually did.

3 WITNESS BENNETT: But in the
4 case of telephone and sewer expansion, there's just
5 a minimum amount of time, even if it's speeded up.
6 In talking with telephone and electric and city
7 engineering staff concerning the utility expansion,
8 there is just very little ability of a community to
9 initiate these major design changes in less than about
10 two years time and so, there really is a time factor
11 that has to be carefully scrutinized. Money, in
12 advance, to provide some of that lead time for planning,
13 would have been extremely helpful in the Valdez case.

14 WITNESS BARING-GOULD: Another
15 point related to this; although they had projections on
16 population growth and to a large extent they didn't
17 have the needed information that would be necessary for
18 any sort of concrete planning to take place. For
19 example, they knew that there were going to be sort of
20 increases in school enrollments and things like this,
21 but the industry hadn't provided figures on specifically
22 how many families were coming into the town and how
23 many kids there would be in those families. Those types
24 of figures they didn't have.

25 There was no information
26 available to the community really prior to the
27 initiation of construction as to sort of what housing
28 needs would be within the community. Alyeska and the
29 community of private individuals was sort of negotiating
30 almost up to the point of construction as to sort of who

Baring-Could, Bennett
Cross-Exam by Bayly

1 would provide housing for whom, where. None of these
2 had been sort of negotiated and settled, which would
3 be essential before any actual planning could be
4 undertaken.

5 WITNESS BENNETT: In fact,
6 there was a tremendous filling up of all motel spaces.
7 A lot of Alyeska and Fluor families spent four and
8 five months in hotel rooms, small hotel rooms, before
9 they were able to move into their permanent dwellings
10 and in fact, the fact that they were all using those
11 motel rooms, made it impossible for other people to
12 locate. The school was anticipating--in the film it
13 said the superintendent was anticipating seventeen
14 hundred students. In fact, in 1975 there were five
15 hundred. In 1976, approximately nine hundred. They
16 never did experience the overload in their school
17 system that was anticipated, although there was just
18 no way to plan at that early period for the kind of
19 impact that could be anticipated and that created a
20 lot of insecurity and fear on the part of the school
21 administration in coping with the change.

22 Q So, if we're to learn
23 anything from the Valdez situation for communities that
24 expect to recieve impacts of the same kind and perhaps
25 similar magnitude, first of all I gather from your
26 evidence that these communities should have as much
27 information from both company and government as to the
28 numbers they expect to locate in the community.

29 A Right.

30 Q Second, they need time of

Baring-Gould, Bennett
Cross-Exam by Bayly

1 perhaps two years to plan and build the various
2 facilities, whether they're sewer, powerline or whatever?

3 A Right.

4 Q And third, I take it,
5 they require impact funds to be either loaned or
6 granted to the community prior to the impacts occurring,
7 otherwise you're always running to catch up.

8 A That's right. And you're
9 also developing at the severe expense of newcomers to
10 the community. In fact, what we were saying when we
11 said that the old-timers in the community withdrew,
12 means that the old-timers in the community are well
13 situated in terms of housing. In a community that's
14 developing rapidly, if you're not well housed, you bear
15 the brunt of all of the stresses that that community
16 is experiencing because your friendships are formed
17 in the bars and restaurants because that's your social
18 locale.

19 You're more likely to be
20 employed in a more stressful occupation. In numerous
21 ways, the newcomers to the community who would like to
22 settle or for one reason or another unable to be well
23 housed, bear the brunt of all of those stresses on the
24 community. More pre-planning, more effort to fund and
25 prepare the community for the development that occurs
26 would reduce the uneven stresses on individual members
27 of the incoming families.

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Baring-Gould, Bennett
Cross-Exam by Bayly

1 WITNESS BARING-GOULD: And I
2 would add one fourth to mention, is that you need
3 control over the land. Valdez did this by expanding
4 its city limits 13 or 20 miles -- sorry 25 miles out.

5 Q That was one of the
6 four things that they did effectively, was to control
7 the land.

8 A To some extent. I mean
9 there were certain definite weaknesses in the case
10 of Valdez with this. There were elements of land
11 ownership over which they didn't have control. It
12 would have been far better if they'd had more control
13 over those.

14 Q I take it then too if
15 you don't have control of these four elements that
16 we've just gone over, even those impacts that you
17 predict may change because of your lack of control
18 over them, whether the number of people expected in
19 schools or the location of various facilities or
20 whatever it is?

21 A M-hm, yes.

22 MR. BAYLY: Those are all
23 the questions I have. Thank you very much.

24 MR. GOUDGE: Mr. Hollingworth
25 for Foothills Pipe Lines?

26 MR. HOLLINGWORTH: No ques-
27 tions.

28 MR. GOUDGE: Mr. Ziskrout
29 for Canadian Arctic Gas?

30 MR. ZISKROUT: I have no

Baring-Gould, Bennett
Re-Examination

questions.

MR. GOUDGE: I have one question for the panel in reply, if I may.

RE-EXAMINATION BY MR. GOUDGE:

Q Professor Baring-Gould, if you look at Table 4 -- Table 6, I'm sorry, I just want to make sure I understand it. That indicates --

A Table?

Q Table 6 at the back of your evidence.

A Oh.

Q That indicates to me, and I wonder whether I read it right, that the cost of living, if I can put it that way, in Valdez actually went down from March, 1973 to March 1976 because I compare \$44.21 for your 45 food items in March '73 to \$40.77 in March '76.

A Yes.

Q Is that the conclusion I'm to draw?

A From food items, yes.

Q So that part of the price index goes down for Valdez over that period.

A Yes.

WITNESS BENNETT: That's because there were more stores; in the earlier case there were fewer stores, and there was a period of disruption in early 1975 or in the early summer of 1975. One of the stores closed down but then with the

Baring-Gould, Bennett
Re-Examination

1 increased competition there was a reduction in the
2 price of food over the long-term.

3 Q Can I just --

4 WITNESS BARING-GOULD: That
5 parallels our general decline in food prices. I
6 think the percent increase in prices over Seattle
7 remain pretty constant, I remember, for that period,
8 and food prices in general in Alaska went down over
9 that period. So I don't think that's anything sort
10 of really particular to Valdez.

11 Q I see.

12 A Valdez's drop was
13 slightly more than the other communities, even
14 Anchorage, for example, went down somewhat.

15 MR. GOUDGE: Thank you.
16 That's the only question I have, sir, and I think
17 that completes the evidence of this panel.

18 THE COMMISSIONER: Well,
19 thank you very much, Dr. Baring-Gould and Miss Bennett
20 We certainly appreciate your coming here to give us
21 the benefit of your own study of impact in Valdez,
22 and let me say once again that I appreciate, as all
23 of us do, that the willingness of people like your-
24 selves from Alaska to let us have the benefit of
25 your own experience with the pipeline construction
26 in your state, because it's kind of helpful to us here
27 in Canada that you preceded us down this road.

28 A Well, as a rejoinder to
29 that I admire what you're doing and wished that we
30 had done that too. It's an honor for us to have been

Baring-Gould, Bennett
Re-Examination

1 able to come.

2 WITNESS BENNETT: I might
3 second that.

4 THE COMMISSIONER: Well,
5 thank you very much. I think we'll have to have a
6 cup of coffee after that.

7 (WITNESSES ASIDE)

8 (PROCEEDINGS ADJOURNED FOR A FEW MINUTES)

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Krauss, Ritter
In Chief

(PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT)

MR. GOUDGE: We have now, sir, a panel on native languages which consists of Mr. Michael Krauss and Mr. John Ritter. Mr. Ritter is familiar to the Inquiry, sir, he's been here before and been qualified before.

MICHAEL E. KRAUSS, affirmed:

JOHN T. RITTER, resumed:

DIRECT EXAMINATION BY MR. GOUDGE:

Q But I understand, sir, there is one item that you would like to add to your curriculum vitae to assist the Inquiry.

WITNESS RITTER: Since that was drawn up, it should be added that since March of this year I've been co-ordinator of the Yukon Territory Native Languages project, based in Whitehorse, and that's not on the C.V. that you have.

THE COMMISSIONER: And that is being carried out under the auspices of the Territorial Government, is it?

A It's funded by the Federal Department of Indian & Northern Affairs, but the funds are administered by the Y.T.G.

Q The Y --

A Yukon Territorial Government.

THE COMMISSIONER: Right.
Got it.

MR. GOUDGE: Q Then Dr.

Krauss, Ritter
In Chief

1 Krauss, if I could turn to you, sir, please, you
2 received your B.A. from the University of Chicago
3 in liberal arts and a further B.A. from Western
4 Reserve University in French and Italian. Is that
5 correct?

6 WITNESS KRAUSS: Yes.

7 Q And your M.A. from
8 philology
9 Columbia University in romance / and linguistics
10 and your PH.D. from Harvard in linguistics and
11 Celtic, is that correct?

12 A : That is
13 correct.

14 Q Your employment has
15 been since 1960 at the University of Alaska as
16 Carnegie visiting professor, and professor of linguistics
17 and then as chairman, the Department of Linguistics;
18 and in addition you've been director, Alaska
19 Native Language Centre for four years, and the chairman
20 of the Alaska Native Language program from 1972
21 to the present. Is that correct?

22 A That is correct.

23 Q You were a visiting
24 professor of linguistics at the Massachusetts
25 Institute of Technology for a year within the time
26 frame that I'm speaking of.

27 A Yes.

28 Q Your publications
29 consist of over 20 scientific papers, articles,
30 monographs on Athabascan, Eyak -- is that the right
pronunciation?

Krauss, Ritter
In Chief

1 A Eyak.

2 Q Eyak, I'm sorry. Tlingit,
3 Haida, and Eskimo linguistics, two books on Eyak,
4 Alaska native language map, which I take it is the
5 -- is what we see on the wall.

6 A That's right.

7 Q I'll be asking, sir, that
8 that map be made an exhibit.

9 You also have forthcoming
10 books and articles on Alaska native languages.
11 Is that so?

12 A Yes.

13 Q And your other professional
14 activities include the development of writing systems
15 for several Alaskan Indian and Eskimo languages,
16 including Athabascan, Haida, Eyak and Siberian
17 Yupik, is that the correct --

18 A Siberian Yupik, yes.

19 Q And you've been engaged
20 as well in the training of first literate speakers
21 unin several Alaskan languages and have participated
22 in the early development of bilingual programs and
23 have been involved in leadership and state-wide
24 movement for native language and bilingual education
25 legislation and development in Alaska. Is that
26 correct?

27 A That is correct.

28 Q Now, Dr. Krauss, I wonder
29 if you might begin, sir, and read your evidence to
30 the Commission?

Krauss, Ritter
In Chief

1 THE COMMISSIONER: Dr. Krauss,
2 just before you begin, what is Eyak?

3 A Eyak is a nearly extinct
4 Indian language from the Copper River Delta on the
5 map in the orange color there, very near Valdez, at
6 the Pacific coastline. There are now three speakers
7 left of the language, one of whom is learning to write
8 but it's too late for the survival of the language,
9 and a good example of exactly the price at stake
10 with the extinction of languages under the pressure
11 of encroachment.

12 Q And it says here that
13 you've been a leader in state-wide movement for native
14 language and bilingual education legislation and
15 development in Alaska. I don't read these in
16 advance. Do you discuss that in your paper?

17 A Yes, I do.

18 Q Oh fine, O.K.

19 A I don't give it in
20 detail but I believe that Mr. Ritter's testimony
21 will include a summary of that legislation.

22 THE COMMISSIONER: Right.

23 MR. GOUDGE: Yes, sir.

24 Q Dr. Krauss, could you
25 begin, please?

26 A With your permission,
27 in this evidence I will be addressing three basic
28 issues. They are:

29 1. The nature of the native languages and their
30 relationship to the culture and values of native

Krauss, Ritter
In Chief

society.

2. The factors which influence the loss and retention of native languages.

3. The necessary language rights, policies and programs required to ensure that native languages remain viable.

No. 1. The nature of the native languages and their relationship to the culture and values of native society. It is not an over-statement to say that in many ways the language is the culture, and that the culture can bear almost any change and any development and still remain viable so long as the language remains alive. The Japanese can wear kimonos only on Sunday and spend the rest of their time making transistors better than we can and can still consider themselves a successful viable society so long as they continue to speak Japanese. To most people in most nations synonymous with cultural survival and survival of one's identity is linguistic survival. In fact, I would go so far as to say that nations rise and fall with their language. When the language dies, the nation is no more. I do not know in history of a single case where a nation has truly survived its language. I can think of many cases where a people, for example, the Basques or Armenians, who while lacking politically an independent republic, have nevertheless remained a nation because of their language -- because their language has remained alive. The North American Indians and Eskimos are no exception to these cases. An example

Krauss, Ritter
In Chief

1 of this that comes to mind immediate is from a
2 recent film made about the work of Edward Curtis,
3 which some of you here may be familiar with. In this
4 film some old Kwakiutls on the coast of British
5 Columbia, who had participated in the film which Cur-
6 tis had made earlier this century, are reminiscing
7 about the past and are asked by one of the inter-
8 viewers the very pointed question whether they felt,
9 speaking of today, the Kwakiutls would survive as
10 a people. They answered that question without even
11 thinking twice that, "Yes, our culture will survive
12 because they are teaching the language in the schools."
13 So probably without even being consciously aware of
14 it, they equated cultural survival with linguistic
15 survival. The strong claim for bilingual education and
16 language rights by native people has a great deal to
17 do with this instinctive identification of cultural
18 and linguistic survival.

19 Turning to the point of
20 native languages, non-native people commonly assume that
21 native languages, as native cultures, are static and
22 resistant to, and perhaps incapable of change. In the
23 same way they assume that if progress in the modern
24 world is to be made, it requires a shift from native
25 to non-native values. So that they assume that the
26 same process requires a shift from native language to
27 English. Based on my professional experience I would
28 state emphatically that it is not the case that
29 native languages are intrinsically inferior to any other
30 or incapable of development from meeting the needs of

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the 20th century. Having worked with highly developed languages, myself, including some recently developed for modern technology, some which are now developing as well as with some which have not yet been developed, I can state that no language, including English, is from the linguistic point of view intrinsically better equipped to deal with the modern world, whether it would be the flying of a jet plane or operating an Xray machine, than Dogrib, Inuit, Hebrew, Japanese, or an Australian aboriginal language. If God created anything equal in this world, it was language. The basic structure of the native languages are perfectly capable of handling modern ideas and concepts. The only thing that is lacking in the case of the so-called undeveloped languages is the necessary lexicon, the vocabulary for dealing with the new material and technological concepts that have been introduced. Of course, the native languages already have their own highly developed vocabulary for their own cultural technology, but insofar as, in this particular case, pipeline building is foreign to the native experience, then appropriate terminology would have to be developed. This Inquiry itself, through its hearings and the broadcasting by the Canadian Broadcasting Corporation of summaries of the proceedings in the native languages has already started this process of development of the language to deal with the new technology.

As a linguist, I can identify the stages necessary for development of native languages to permit them to meet the 20th century technological needs.

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Stage one is the development of a writing system. It has been demonstrated over and over again that any language can be written. All you need is a competent, and I'll repeat competent phonological analysis and a competently designed orthography. The system can then be learned and used just as well as English. In fact, in most cases, it can be used better than English.

THE COMMISSIONER: Excuse
me. I don't want to seem stupid. Orthography, that's
writing is it?

A Orthography is a writing system -- system of symbols and spellings throughout words of a language.

The system can then be learned and used just as well as English. In fact most cases, it can be used better than English. English has a complicated orthography, and languages which don't start with two strikes against them like that are capable of developing a superior orthography to the English one. This will be an orthography which better reflects the sounds and style which people are already familiar with. It can, for that reason, be learned faster than the average native speaker can learn to read and write English, than the average native speaker of English can learn to read and write English. That is to say that, everything else being equal, --

Q I don't
want to miss that thought.

: Right.

A Correct.

A Yes. In other words,

O : Ah, now

A Because it is ortho-

graph y which better reflects the sounds and styles which people are already familiar with. That is to say, that everything else being equal, the possible Dogrib orthography taught in the schools versus a comparable southern situation with English orthography would produce Dogrib readers and writers who are more fluent and more literate in their own language per year of schooling than would be the case in the English, because Dogrib would be easier to learn than English, given the complex history, development and

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1 nature of the English orthography. But even his
2 practical advantage to the Dogribs is minor compared
3 to that of being able to learn in their own language,
4 which they naturally understand and use far better than
5 any other.

6 So, not only is it
7 possible to learn to read and write faster, but it's
8 possible thence to learn to do anything faster be-
9 cause you can be educated in your own language, the
10 language which you understand the best.

11 Stage two in the lang-
12 uage development proposal is that people need to be
13 trained in the reading and writing of their native
14 language. That is, in the implementation of the
15 orthography and the development of a literacy base.

16 Stage three, which
17 overlaps with stage 2, is the development of the
18 language itself, that is the development of a tech-
19 nological vocabulary. English has for the most part
20 developed its vocabulary by borrowing promiscuously
21 from many other languages. The unabridged Webster
22 dictionary is made up of some 51 percent of words
23 derived from Latin and another 20 some derived from
24 Greek, and only some 20 percent are from Anglo-Saxon
25 stock. Borrowing is one way in which the native
26 languages could develop a wider vocabulary. But
27 another way of developing a language would be to use
28 the stock of native words or roots. This is a very
29 common procedure too, which goes on in many languages,
30 but not so much in European languages, although for

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1 example, German and Icelandic have developed -- have
2 adopted this method of development, sometimes known as
3 purism, sometimes it's easier, sometimes it's harder
4 to do than the borrowing. The Inuit and Dene languages
5 of Northern Canada are reknown for their ability to
6 perform new words easily and quickly and this has been
7 the basic pattern in their development when confronted
8 with needing a name for a new material object such as
9 a typewriter or a helicopter. They very quickly
10 come up with a highly descriptive and natural native
11 derived term, a stem plus affixes from the large native
12 inventory, which is more meaningful to a native speaker
13 than is the "English" words, usually derived not from
14 English words, but from Latin or Greek. So that
15 the native derived words are more meaningful to a
16 native speaker of that language than the word heli-
17 copter is to an English speaker, because he doesn't
18 know what the helic or the opter means. This develop-
19 ment of vocabulary requires trained people and a great
20 deal of hard work. A hard but challenging work.
21 This in fact is the 20th century challenge that these
22 languages can and should face. An example for such a
23 language development program at the turn of a century
24 was when a group of dedicated Hebrew scholars spent
25 a lot of time coining Hebrew words for the phenomena
26 of the modern world. This has meant that men can
27 successfully fly jet-planes using the very language
28 which in the past was the language of shepherds. There
29 is no reason why a similar process can not take place
30 in the Inuits and Dene languages.

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1 I may add that it naturally does take place unless
2 suppressed. Therefore, the argument that the native
3 language is intrinsically incapable of serving the
4 needs of the 20th Century and therefore, regrettably,
5 must go the way of other outmoded aspects of life, is
6 a false argument. It is not necessary that the native
7 languages be lost. Such a tragedy is avoidable, and
8 if we equate language with culture and culture with
9 identity and survival, such an avoidable loss surely
10 can not be tolerated by a multi-cultural society,
11 such as Canada claims itself to be.

12 Subject number 2, the
13 factors which influence the loss and retention of
14 language.

15 While then the loss
16 of language is unnecessary and avoidable in many
17 places it has nevertheless occurred. The Alaskan
18 experience is relevant here, although language loss
19 in Alaska is more severe than that which I understood
20 has taken place in Canada, particularly in the Cana-
21 dian North. The first contact in Alaska with the
22 native people were the Russians. Every native lang-
23 uage survived that invasion. For various reasons
24 Russian penetration and domination did not kill any
25 native languages. The Russians killed a lot of people
26 but no languages. The American invasion did not kill
27 intentionally many people, although disease and dis-
28 ruption took a terrible toll, but they were deadly to
29 the languages. In Alaska the gold-rush was lethal
30 wherever it hit as was the contact introduced through

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1 the setting up of canneries on Alaska's Coast. How-
2 ever without question, the most deadly force to the
3 language was the schools. That is, where the battle-
4 ground of Cowboys and Indians has taken its final
5 form. "The winning of the West", and "triumph of
6 European civilization" over the native people has
7 switched from machine guns to books. The "final
8 solution to the Indian problem" and the Eskimo problem
9 was seen as educating the native person out of exis-
10 tence as such. This has not been a physical war,
11 although it was common practice, and I understand
12 you have heard evidence at the community hearings about
13 this, for native children to be physically beaten for
14 speaking their own language in the schools -- this
15 has turned rather into a cultural war in which you
16 have native children who by law, are imprisoned in
17 classrooms at the total mercy of a teacher who has
18 more control and dominance over them than their own
19 parents. The school thus has been the main scene for
20 the cultural atrocity which has taken place in Alaska
21 over the last seventy years.

22 In Alaska, other factors
23 which have adversely affected the native languages
24 have been the building of the Alcan Highway and other
25 road and railway systems. The map I have prepared,
26 which is an exhibit to my evidence, of the present
27 status of the native languages in Alaska shows that
28 language erosion is directly related to proximity to
29 trade and transportation corridors. Thus the lang-
30 uage where the dot on this map is hollow, indicating

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1 that no children speak the language --

2 O C Sorry,
3 where's that map?

4 A That map is the coloured
5 printed one on the wall there. Every native village
6 is shown on that map and the dot indicating the loca-
7 tion of the village is either a printed hollow empty
8 or a half full or blackened through, to indicate to
9 what extent the language is persisted or in its
10 viability in the younger generation. Thus the village
11 where the dot is hollow, indicating that no children
12 speak the language, are very close to the areas of
13 white settlement and intensive contact and domination
14 by the whites. It follows thereto, that's where the
15 dot is black throughout There's a close correlation
16 between that and the absence of road systems, rail-
17 roads and heavy white population. We can not claim
18 it necessary to await proof, again, installing a pipe-
19 line and waiting 20 years to see what happens, to get
20 a very good idea of the implications for the native
21 language of the opening up of the Mackenzie Valley
22 by an oil and gas transportation corridor, with all
23 the associated development and immigration of non-
24 natives which such "opening up" traditionally has
25 involved in North America. We can not claim a repeated
26 experience of history to be irrelevant here.

27
28
29
30

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1 Thus it is influx whites into
2 an area that is certainly one of the most important
3 factors in causing language loss. The intrusion of
4 white settlers into the social fabric of the native
5 communities, particularly will have this effect. I have
6 direct experience of Alaska villages with native
7 populations of two hundred where the presence of a
8 single school teacher and his family has over a number
9 years thoroughly undermined the native language. The
10 consideration is not simply one of numbers but rather
11 one of attitude. There is no percentage so small of
12 white's penetration that could not be fatally dangerous
13 to the survival of the native language.

14 It cannot be put in terms of
15 population percentages. So long as whites coming to
16 an area do so with the view that one day you'll be
17 civilized like us and speak English, then you'll have
18 what appears to be a self-fulfilling prophecy. On
19 the other hand, if native people are taught English,
20 which is the modern world they need to learn, with the
21 attitude that English is never meant to replace the
22 native language, which is irreplaceable and priceless,
23 then you have the possibility for a true bi-cultural
24 society and one which avoids the cultural imperialism
25 and colonialism which has so far characterized white
26 dealings with native North Americans.

27 This colonial approach to
28 language is borne out in the frequent argument one hears
29 by many white people in favor of native people shifting
30 to English along the lines that "How are you going to

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go to the bank or the post office or how are you going to get on with your boss if you don't speak English?" The underlying assumption here, of course, is that the bank teller and the post office clerk and the boss will be non-native speaking. This is the arrogant and imperialistic attitude which implies that the native people shall have no role in the modern world except as passive receivers of services, powerless, and they will never be prime movers or their own leaders.

I understand that Dr. Hobart in giving evidence before you has suggested that integration between whites and natives on a project such as a pipeline could have beneficial effects in terms of encouraging egalitarianism and improving racial relations. My experience is that given the normal nature of the relationship between white and native at the frontier, from a linguistic point of view as well as any other, that this relationship is never egalitarian. Whites expect to communicate with natives, not in the native language, but in English. There is nothing egalitarian whatsoever about that relationship. This "integration" really only means assimilation.

Based on the experience of the contaminating intrusion of non-natives into native speaking areas, for the language, I would predict that the influx of the six thousand or so workers I understand would be required for the building of the proposed Mackenzie Valley Pipeline, for three to five years, would in the absence of some special recognition of

1 native rights or policies designed to implement them,
2 be fatal to the survival and growth of native languages.
3 If the project were to last just a year or so, and
4 during that time the camps could be hermetically sealed
5 off and contact between the camps and the people in the
6 native communities could be prevented, then perhaps the
7 fatal effect would not be there.

Thus, neither "integration" nor its opposite "quarantine" seem to be realistic solutions to the problem of how to get the pipeline through native country without destroying the native people.

The real solution or issue
or the survival of native languages is not the
quarantining of native people from the outside world,
but rather one which requires patience, hard work and
self-control of a kind which I have never yet seen in

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1 this society, either in America or in Canada; in the
2 United States or in Canada.

3 The basic principle underlying
4 the program I described would be that no development
5 such as the proposed pipeline should take place until
6 such time as the native languages have been fully
7 guaranteed survival. This, as I explained, is
8 synonymous in my mind with a guarantee of the survival
9 of the native people themselves.

10 The program which I would
11 envision ensuring the survival of native languages
12 would require:

13 For all the native
14 languages of the area through which the pipeline will
15 go or upon which it will have any important effects,
16 such as the recruitment of native employees, This
17 program would envisage:

18 1. That there would have
19 to be a basic writing system and the appropriate
20 literature in each language.

21 2. That there must be a
22 general literacy in the native language in these areas,
23 a successful program implementing the use of the native
24 language in any development. That is, the necessary
25 literacy and language vocabulary development and its
26 firm establishment in the schools, mass media, and
27 economic and cultural life of the area.

28 3. That the native languages
29 would, as a matter of course, be expected to be the
30 dominant, to remain the dominant language of the area;

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1 to remain so forever.

2 What I am saying requires a
3 basic change in the attitudes to which we bring the
4 native languages and requires a social revolution in
5 our relationships to native people. The result of
6 such a revolution, which I believe is already underway,
7 is that in everyone's expectations the native language
8 will be the first language of the educational system,
9 of the street, of business, of any agency activity in
10 those areas where native people live.

11 This attitude and expectation
12 would then be extended to the pipeline project. The
13 day when, for example, the specifications and the
14 working documents for construction and operating of
15 the pipeline are written in Dogrib or in Inuit and the
16 talk about welding the pipeline is in the native
17 language, that is the day when the pipeline project
18 will not do the native languages any harm, nor threaten
19 the survival of the native nations.

20 Since I understand you are
21 required to formulate terms and conditions under which
22 the proposed pipeline can be built, I would strongly
23 recommend that you adopt as a recommendation this
24 principle so that it would be a term and condition,
25 that before the Mackenzie Valley Pipeline goes ahead,
26 that specifications and the working documents for
27 construction and operation of the pipeline be available
28 in the native languages and that those working documents
29 and instructions be understood by the native people
30 and anyone directly associated with the pipeline project

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1 in that area.

2 This principle also implies
3 for another example, that anyone directly associated
4 with the project, such as a foreman; unless it be a
5 person of highly specialized skills, temporarily
6 brought in, for example, lawyers or radiologists,
7 be able to speak the native language of the area,
8 whatever his own origin. My point is here that this
9 is not a matter of birth right or race specifically,
10 but a matter of ability to speak that language and
11 since most people who can speak Dogrib happen to be
12 Dogrib, then most of the people, so long as that's
13 true, people doing this work will have to be Dogribs
14 or Dogrib speakers but it does not exclude the
15 possibility of someone else learning the language.
16 We're talking now about the survival of the language.

17 As an example, the Indonesians
18 would hardly tolerate a foreman on a job who couldn't
19 speak Indonesian. This is nothing more than would be
20 expected by any self-respecting nation.

21 If it is maintained that the
22 writing of the specifications in native language is
23 impractical, then one must face up to the implication
24 that it is impractical to allow these languages and
25 nations to survive.

26 The necessary basis for this
27 program for ensuring the survival of native language
28 must be a clear legal Declaration of Language Rights.
29 A line can and should be drawn here between the
30 indigenous or native languages and immigrant languages.

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1 I, myself, have studied Icelandic devotedly and there
2 are many speakers of that language in Manitoba but there
3 is, and probably always will be an Iceland where
4 Icelandic is spoken regardless of its fate in Manitoba.

5 However, if Dogrib ceases to
6 be spoken at Fort Rae and the surrounding areas, it
7 will never be spoken any longer, anywhere in this
8 world. Its loss in that respect is absolutely
9 irreparable. The language rights of native speaking
10 people should not have to bear the burden of whatever
11 problems are associated with recognizing the rights
12 of speakers of immigrant languages which are not
13 uniquely Canadian.

14 In Alaska, legislation was
15 passed in 1972, the primary purpose of which was to
16 guarantee language rights for native people, but this
17 legislation was not specifically so worded and there-
18 fore, does not discriminate between indigenous and
19 immigrant languages. It provides that in any school
20 district where fifteen or more school children speak
21 a language, other than English, that school must have
22 at least one teacher who is fluent in that language
23 and curricular material and programs in that language
24 must be available.

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1 This legislation has since
2 been revised somewhat and it now applies to a school
3 where eight or more children speak a language other
4 than English.

5 Q Well, is the intent of
6 the legislation still what it was as you described
7 it to secure the survival of native languages, or
8 --

9 A The intent was to
10 secure the survival primarily of the native
11 languages and the notion of the perpetuation of
12 immigrant languages was not explicitly brought out.
13 Since then there are small immigrant minorities in
14 Alaska who have questioned the scope of legislation,
15 but primarily it was directed to and funded
16 exclusively for native languages.

17 Q The amendment producing
18 the qualifying number of 15 to 8 was made with the
19 same intent, I take it.

20 A Yes, it was, and it
21 was made also because that's synonymous with the
22 minimum number required to have a school at all.

23 Q And you said this
24 was passed in 1972. How are they making out? For
25 instance, are they successful in achieving a state
26 of affairs where there is at least one teacher in
27 each of these districts who is fluent in the native
28 language?

29 A The main problem, they
30 have not been totally successful in all areas, the

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1 main problem being one of simply organization and
2 financing. But the technical problems definitely have
3 been demonstrated over and over again and could be
4 overcome. In all but the most -- the smallest language
5 communities, none of which I believe you have to face
6 here in Canada, there are some languages in Alaska
7 which are spoken in communities that are unique to
8 a community, the total population of which is 40
9 people, and there in that population you may not
10 find or be easily able to find people who are able
11 to take over the responsibility of teaching in the
12 school with such a small population base.

13 Q You mean where the
14 language is unique to 40 people?

15 A Where the language is
16 unique to 40 people.

17 Q Yes.

18 A There are cases on
19 that map, the total populations are given on the
20 map. I do not believe that you have any such situations
21 in the pipeline area in Canada.

22 This declaration of language
23 rights should embody the following statements; that
24 the native people have the right and expectation to
25 maintain their languages forever, and that there be
26 no coerced abandonment of those languages; that the
27 dominant language of the areas where native people
28 live shall be the native language, to permit the native
29 people to control their own destiny through their
30 own institutions; any institution or service affecting

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1 native people, for example education, administration,
2 church, mass media, must do so through the native
3 language. If it does not do so, it is not truly serv-
4 ing the native people but threatening their survival
5 instead. This would certainly include the pipeline.

6 I would like to turn now to the
7 question of how long a process is involved in this
8 program for linguistic survival.

9 The first phase, the
10 development of a writing system, if it is not already
11 there, can be done relatively quickly, and I understand
12 in the case of the Canadian languages involved that
13 in many cases this has already been done, a writing
14 system has developed. It is a relatively finite
15 scientific task which could be carried out within a
16 few months of competent intensive work. The next
17 task of achieving general literacy in the language
18 is a much longer process. It is possible to train a
19 person of average ability who is already literate in
20 English to be literate in the native language in the
21 time frame of six weeks to six months. This estimate
22 is based on our experience at the University of
23 Alaska in the work of the Alaska Native Language
24 Centre. But to translate that individual training
25 program into a program to ensure general community
26 literacy through the schools and through adult
27 education, that task would probably take between five
28 and 15 years, assuming of course that the schools and
29 the other educational institutions are fully committed
30 to this endeavor. It also assumes that the money is

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1 available for the development of the material in the
2 form of books and other teaching devices; and I might
3 add that if this money be available on a continuing
4 basis and not be something that people have to
5 squander a large part of their energies in fighting
6 for renewed funding every year, which would be some-
7 thing which is assured over a long enough period of
8 time for people to concentrate their efforts not on
9 squabbling for money but on using the money.

10 What you have to understand
11 about such a process of achieving general literacy
12 isthat you have to go through several generations here,
13 generations of literacy. The first generation may
14 take six weeks to six months to train. This first
15 generation may in turn teach other adults or they
16 may become the school teachers who will be training
17 the 5-year-olds. The next generation would involve
18 more people, and so on and so forth, until you have
19 a dynamic process in which everyone in the community
20 is involved. The five to 15 years' time frame is
21 one which seems to be borne out in those countries
22 which have had successful grassroots literacy
23 programs. There is no reason to expect them
24 to be less successful in Northern Canada. Furthermore,
25 while in this five to 15-year period you can achieve
26 a general literacy, for literacy to become ingrained
27 and much literature develop would take a whole genera-
28 tion -- by that I mean a biological generation. Such
29 a strong tradition of literacy is something which
30 constantly evolves and in the case of the European

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1 languages, has been developing for hundreds of
2 years.

3 Q Well, Dr.

4 Krause, is there any -- you say here,

5 "The five to 15-years time frame is one
6 which seems to be borne out in those
7 countries which have had successful and
8 intensive grassroots literacy programs."

9 Are there places where a language hitherto unwritten
10 where a system of writing has been developed for
11 that language and a program has been undertaken such
12 as you urge?

13 A Yes, I'm thinking
14 specifically of cases like that where it's not so
15 much a case of a writing system has been around and
16 literacy has been around, but very little literacy
17 has been around that in fact languages started with
18 a new writing system. The Soviet Union is a fairly
19 good example. They have a policy there of basic
20 education -- a right to basic education in one's
21 native language, no matter how small the nation and
22 I'm thinking of some cases of Siberian native
23 languages right across the Bering Strait from us
24 where they developed writing systems in 1932 and
25 began literacy and achieved pretty nearly universal
26 literacy by the time of the interruption of the
27 Second World War.

28 Q And are those
29 languages flourishing in written form today?

30 A They are flourishing

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1 insofar as the purpose of the Soviet literacy
2 program was to keep the languages flourishing. In the
3 case of the Inuit, which are Siberian Yupik which they
4 had over there -- I don't think they were as interested
5 in perpetuating that because of the ties abroad, as
6 I say, on the other side of the date line. But the
7 languages which were confined within the Soviet
8 Union and don't have strong ties abroad, they encourage
9 the continuation of these and they are flourishing,
10 to the very best of my knowledge, yes. But to arrive
11 at a state of literacy from the invention of the
12 alphabet, this was achieved basically during the
13 period 1932 to 1942.

14 Q M-hm.

15 A And I'm only guessing
16 plus or minus five years here to achieve the same
17 thing in this part of the world where the basic
18 linguistic situation is not vastly different.

19 Beyond achieving general
20 literacy, you would also require a Language Commission
21 for each language area whose task it would be to de-
22 velop the language and disseminate that development.
23 Such a Commission would consist of native speaking
24 people who are well-trained in linguistics or
25 who were working with linguists to coin new words
26 in order to adapt the language to the new concepts
27 and technology.

28 You will see from the
29 program I have described that although there are
30 important components in this program to guarantee

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1 language survival other than the school, the school
2 system is perhaps the single most important one.
3 The time frame required to develop a bi-cultural,
4 bi-lingual school system is considerable. I under-
5 stand that Ethelou Yazzie of the Rough Rock School,
6 Rough Rock Navaho Demonstration School has already
7 given evidence here about this. It not only requires
8 trained teachers. It requires the development of
9 curriculum material and teaching devices which are
10 not presently available either at all, or available
11 in very great numbers.

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1 One further matter which
2 requires consideration in this program is the mass
3 media, particularly electronic media. Here, as in
4 other areas, there should be a clear recognition that
5 the native languages are to be the predominant languages
6 of communication. It should be squarely faced that the
7 provision of such service in the native language, for
8 example, newspaper, radio and television, will be much
9 more expensive than in English. The issue here is no
10 different from that in other areas because whether it
11 is producing an hour or television in Inuit or Dogrib
12 or producing a periodical in these languages, it is
13 a much more expensive project per consumer than producing
14 or simply using a program or a book perhaps already
15 available in English or French.

16 The cost of not doing this,
17 however, is the difference between survival and
18 extinction of the languages. I would use an analogy
19 which perhaps is not entirely inappropriate to this
20 Inquiry, given the evidence you have heard on
21 environmental issues and particularly on endangered
22 species. It costs a great deal more to maintain a
23 whooping crane per bird than it does a turkey, yet it
24 is widely conceded that the maintenance of the whooping
25 crane is a worthwhile investment in the future of the
26 nation and in its natural resources.

27 An important component in the
28 success of this program will be the perception of the
29 native people that it is their program and is one which
30 is under their control at all times. It truly requires

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1 the ability to speak the native language. This is
2 virtually guaranteed by virtue of the fact that almost
3 uniquely the people who are capable of speaking these
4 languages happen to be the native people. Given the
5 nature of the history of education in the Northwest
6 Territories, as I understand it from the evidence of
7 Mr. Gillies and Mr. Robinson and the almost exclusive
8 control of this by non-native people, it seems likely
9 to me that only if the institutions of education for
10 native people and other institutions I've described
11 are clearly under native control, will this perception
12 exist.

13 I would like to repeat that the
14 critical element in this whole program is one of basic
15 attitude. It assumes an attitude that the language
16 of this place is the native language and that all
17 people coming to this place clearly understand that.
18 As I have said, this requires a social revolution in
19 terms of white responses to natives and of native
20 self-perception also. It may be that the land claim
21 settlement, which I understand the native people are
22 seeking prior to any pipeline development, could play
23 an important role in identifying legally and symbolically
24 the necessary change of basic attitude toward language.
25 That is, of course, something which you are in a much
26 better position to judge than I. I offer that comment
27 from my perspective as a linguist and as an observer
28 of the history of white-native relations in the area
29 of language.

30 I have been asked to comment

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1 on what would be the effect on the early stages of
2 development such as I have outlined if, before the
3 process of achieving general literacy had been
4 achieved, the pipeline project went ahead. My
5 considered opinion on that is that such a simultaneous
6 project would not work. The one would completely
7 undermine the other.

8 In Alaska, the Language
9 Rights Act preceded approval of the pipeline by a
10 mere six months and was a classic case of too little
11 coming much too late in certain areas. My understanding
12 is that in Canada you have the unique opportunity to
13 establish a program while the languages in many
14 places are strong and even in those places where they
15 have been badly eroded, they are yet capable of being
16 renewed. You have an opportunity to chart here a
17 unique course to guarantee one of the most basic of
18 human rights, the right to think and communicate in
19 the language your mother and father taught you and
20 to expect your children to do the same.

21 That's the end of my
22 testimony.

23 MR. GOUDGE: Thanks very
24 much, Dr. Krauss. Mr. Ritter, I wonder if you could
25 continue, please sir, and read your evidence to the
26 Commission.

27 WITNESS RITTER: I would
28 like to preface my remarks, Mr. Commissioner, be
29 re-emphasizing one of the key points made in Professor
30 Krauss's submission, namely that language and culture

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1 are inseparable entities and the loss of one entails
2 the loss of the other. In particular, when we speak
3 of the possible loss of X language in the Mackenzie
4 Valley, we are not, as some might be led to think,
5 simply considering the possible replacement of an
6 esoteric, inscrutable language spoken by a small number
7 of people, by a particular national, official language
8 such as English. We are rather concerned with the
9 ramifications of this loss in terms of cultural
10 identity, cultural preservation and ultimately
11 political self-determination.

12 I know that during the course
13 of the community hearings, you have on more than one
14 occasion listened to witnesses describe what it means
15 for them and for their children to lose their language
16 and to detail some of the traumatic effects this loss
17 has engendered. Their testimonies are far more
18 eloquent than the relatively dispassionate analysis
19 we have to offer, several levels of extraction removed
20 therefrom, but I think that the thrust and import of
21 those individual testimonies clearly emphasized the
22 the equation of language and culture to which we
23 allude. I, therefore, believe that you have perhaps
24 already gained some intuitive sense of what is at stake
25 here.

26 In what follows, I would like
27 to establish the three general points:

28 1. Certain of the native
29 languages of the Mackenzie Valley are already in grave
30 danger of loss and collapse of viability. Others, still

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1 strong and flourishing at present, are also being
2 jeopardized by forces impinging on them from outside,
3 particularly the media and educational institutions.

4 2. Without proper safeguards,
5 the effect of massive development in the valley will
6 be to hasten the erosion of native languages and to
7 exacerbate an already tragic situation in which young
8 people are being forced to give up the language of
9 their parents as well as the traditions, lore and pride
10 associated with a knowledge of that language.

11 3. The Dene and Inuit
12 inhabitants of the valley have a fundamental right to
13 maintain their languages, traditions and cultures.
14 This right, universal in application, must be guaranteed
15 by law because in the absence of positively worded
16 specifications of language rights, we can only expect
17 a continuation of the present situation in which the
18 languages of the valley are imperiled and ultimately
19 lost entirely.

20 I will now discuss these
21 points one by one:

22 Language viability. Here I
23 wish to restrict my comments to those languages and
24 settlements with which I've had some first-hand contact,
25 i.e., the Delta communities of Fort McPherson, Arctic
26 Red River, Aklavik and Inuvik, these are largely
27 Loucheux and Inuktitut speaking areas, as well as
28 Old Crow and Mayo in the Yukon Territory, these being
29 Loucheux and Tutchone speaking areas. These particular
30 communities share one important linguistic characteristic.

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1 Young children now speak English rather than the native
2 language as their first language.

3 The communities also share
4 another important characteristic. They've all been
5 affected by road construction and by the initial
6 stages of large-scale development and this, I would
7 argue, has contributed substantially to the decline
8 of the native languages. This general situation
9 contrasted dramatically with that in other areas of
10 Mackenzie Valley in which the native languages are
11 still vigorously maintained by even the youngest
12 children and show considerable signs of strength in
13 the face of persistent English domination. Here I
14 have in mind Dogrib of Ft. Rae, Lac LaMartre and Detah,
15 Slavey of Ft. Liard, Nahanni Butte, Trout Lake, Ft.
16 Wrigley, Ft. Franklin, and Ft. Providence and possibly
17 Hareskin of Colville Lake as well. All of these are,
18 by reports, still spoken as first languages by native
19 children. Leaving aside for a moment the status of
20 these somewhat more fortunate languages, I would like
21 to comment on the present status of Athabaskan and
22 Inuktitut within the delta and Yukon communities
23 mentioned above.

24 The seriousness and gravity
25 of the situation cannot be over-emphasized. I do not
26 know of a single child or young adult under the age
27 of twenty who continues to speak Loucheux or Tutchone,
28 for example, and I suspect and am told that the same
29 situation holds for young Inuit as well. It may come
30 as a surprise to some people to learn that even in

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1 proverbially isolated Old Crow, English is now the
2 first language of children entering kindergarten and
3 grade one. This means that English is now stabilized
4 perhaps irreversibly so, as the first language of the
5 delta and Yukon communities.

6 The youngest competent speakers
7 of the native languages are in their mid to late
8 twenties, i.e., young people who grew up speaking their
9 native language before entering the school system and
10 who have managed to maintain their contacts with their
11 home settlements and with people who speak the same
12 language. In Ft. McPherson, for example, many of the
13 first generation hostel students, Fleming Hall was
14 built in 1959, have retained a knowledge of and
15 adequate fluency in the native language. Those who
16 entered the system later are less able to handle
17 Loucheux competently.

18 Now, in spite of this bleak
19 assessment, I would like to emphasize that in all these
20 settlements, one can witness a widespread passive
21 competence in the native languages among children and
22 young adults alike. Put simply, this means that they
23 will in all likelihood hear the language spoken in the
24 home or village on a daily basis and will, in most
25 cases, comprehend what they hear, even though they do
26 not use the language actively themselves. A typical
27 manifestation of this phenomenon is witnessed when
28 parents speak to their children in the native language
29 only to have them obey commands without comment or to
30 reply in English.

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1 The extent of this passive
2 competence varies among individuals, families and
3 communities, and depends critically upon the extent
4 of native language usage in the home. Although not
5 easily quantifiable, this passive competence is
6 evidenced in all the settlements I have visited. It
7 must therefore be emphasized that in spite of severe
8 erosion of native language usage in an active sense,
9 the native languages continue to be a fact of life
10 for the children and play a vitally deep role in
11 their cognitive development. In no sense are the
12 languages yet dead.

13 One significant educational --

14 THE COMMISSIONER: Excuse me,
15 sorry, I just wanted to make sure. I think I know
16 what "cognitive" means. Maybe you would just explain
17 it?

18 A Well, the fact that
19 the children can understand what possibly a grand-
20 parent or parent is saying to them, even though it's
21 not in English, it's understood by them. It means
22 that it's a part of their mental apparatus or
23 equipment, they do have an ability in the language
24 although it's expressed in passive rather than active
25 sort of way of --

26 One significant educational
27 consequence of these facts can be noted straight away.
28 The sociolinguistic climate of the settlements is
29 particularly favorable for native language instruction
30 in, the early grades. The children possess in varying

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1 degrees, an untapped reserve of linguistic knowledge
2 (this passive competence); they are still at the
3 optimal age levels for language learning; and they
4 have ample opportunities for spontaneous and creative
5 use of the native language outside the classroom.

6 Now the reluctance or
7 inability, or both, on the part of the children to
8 speak the language can be traced to a complex pattern
9 of social pressure, acculturation, and most especially
10 to the pervasive dominance of English in the educa-
11 tional system, the media, and in fact all areas of
12 life which involve dealings with the dominant
13 political institutions of the area.

14 Attitudes towards native
15 language usage vary considerably from individual to
16 individual, as might be expected, and it is of course
17 the middle-aged and older native people who voice
18 the strongest concern over language loss. However,
19 many of the younger adults (age 20 to 30) also lament
20 the deterioration of their language and their own
21 competence in it, and speak bitterly of their early
22 experiences in the hostel system where in their view
23 the patterns of loss were firmly established. And as
24 many of them have pointed out, the question of choice
25 was never raised; that is the system was so structured
26 as to force them to learn English at the expense of
27 losing their own language. No one, to my knowledge,
28 has ever contended that learning English was not worth-
29 while; on the contrary, it is commonly recognized that
30 acquiring a command of English is both essential and

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1 also inevitable. Where the system failed tragically
2 was in its attempt to teach English while systemati-
3 cally downgrading the importance of the native lan-
4 guages, or by actually denying their existence. Many
5 middle-aged parents, fluent in their language, now
6 speak only English to their children but are clearly
7 unhappy with the situation. The same holds with even
8 younger parents, themselves now conditioned to speak
9 only English. We have here a rather dramatic
10 illustration of a point made in Professor Krauss' pre-
11 sentation, namely that a single generation of English
12 domination, particularly within the schools, can lead
13 to severe and possibly irreparable damage to native
14 language and the culture of which it is a reflection.

15 Given this sketch of the
16 sociolinguistic setting, one may reasonably ask what
17 is being done at present by local educational insti-
18 tutions to encourage the survival of these languages
19 and to promote meaningful bilingualism among the
20 native children. The realistic answer must be very
21 little. Although the Departments of Education in the
22 Yukon and Northwest Territories have from time to
23 time made sums of money available for the development
24 of native language and culture programs in various
25 locations, and while a significant handful of
26 administrators and teachers entertain sympathetic
27 attitudes towards the native languages, the fact
28 remains that most local efforts to teach the
29 languages have been sporadic, unco-ordinated, lacking
30 in professional support staff, and have not maintained

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continuity from year to year. The results of these efforts, so far as I am able to judge, have been very uneven, precisely because there has been no overall holistic approach to the teaching and development of these languages.

In the case of the Northwest Territories, a per capita "cultural inclusion" grant (approximately \$15 per student) is made available to local School Committees and is specifically allocated for expenses incurred in teaching such topics as the local languages, arts and crafts, trapping or anything else that might be designated "cultural" by the School Committees. In many (but by no means all) cases these funds are in fact used to employ paraprofessionals to teach the local language to school children, but it has on more than one occasion been the case that funds are exhausted before the school year ends and language instruction ceases abruptly. There are many other problems, conceptual and pragmatic, associated with the cultural inclusion grants, and the present litany could easily be extended, but the fact remains that bilingual education is not yet a reality for native children of the Canadian Arctic. In this respect my experiences during the last four years have borne out the opinions expressed by Mr. Paul Robinson, earlier in these hearings.

As Professor Krauss has pointed out, it is not merely the school system which has exerted a destructive effect upon the native languages. Another major influence which deserves

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1 further mention is the media, particularly radio and
2 television. In this connection I should like to
3 briefly discuss one example which I think nicely
4 illustrates the kinds of problems that have arisen.
5 CHAK radio in Inuvik, a local C.B.C. outlet, has
6 done an admirable job in my estimation in providing
7 broadcast coverage in the native languages. While I
8 am at present unable to provide you with any hard
9 figures detailing the numbers of hours of weekly
10 native language programming, I do know that the amount
11 and quality of such programming has steadily increased
12 since 1971 when I first came north. Regular features
13 of CHAK's broadcast schedule include community news,
14 information, stories and legends, and musical request
15 programs in Inuktituk and Loucheux. As a result of
16 recent tie-ins with Fort Good Hope and other
17 upper Mackenzie communities, the station has added
18 programs in Slavey. The Loucheux programs are listened
19 to regularly in Old Crow as well as the delta
20 communities, and are avidly followed in Arctic
21 Village and Fort Yukon, Alaska, when weather conditions
22 will permit their reception. So far as I know, none
23 of the Alaskan stations can or will provide the same
24 kind of in-depth native language programming. C.B.C.
25 radio is therefore much further advanced in its
26 approach to native languages than commercial
27 stations in Alaska.

28 So far so good. It turns
29 out, however, that the many progressive gains made by
30 CHAK in this area are severely threatened by concomitant

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1 development in television broadcasting, particularly
2 with the installation of the Anik communication
3 satellite. We now find that in some communities,
4 Fort McPherson and Inuvik, for example, rural Vancouver
5 based coverage is available from morning till night.
6 Many, if not most households in Fort McPherson now
7 possess television sets, and the number of hours of
8 daily consumption is quite high. As a result, the
9 radio is less frequently turned on and often only
10 when local personal messages are broadcast several
11 times daily. The net effect of this new development
12 should be clear. Television has drawn more and more
13 people, particularly the young, into its sphere of
14 influence and has further reinforced the one-way
15 acquisition of English and southern values. The
16 good efforts of the radio to reflect northern
17 values and lifestyles are thus serverely undermined.

18 This state of affairs has
19 been commented on by Mr. Tagak Curley, executive direc-
20 tor of the Inuit Cultural Institute. In a brief
21 presented to the Canadian Radio Television Commission
22 in May of this year he stated:

23 "14 Inuit communities now receive C.B.C.
24 Northern television service. This service
25 lasts on the average 16 hours per day. There
26 are only two programs a week in Inuktitut,
27 the language of the Inuit. They total one-
28 half hour. That is 30 minutes out of 112 hours
29 a week. This is unacceptable by anyone's
30 standards.

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1 We do not feel that we need to dwell at
2 length on the devastatingly destructive poten-
3 tial of southern television in the north. We
4 do not need to remind the Commission of the
5 irrelevancy of cops and robbers and life in
6 the suburbs to an Inuit family. We do not
7 need to point out the absurdity of programs like
8 'All in the Family' in our Inuit homes."

9 Mr. Curley goes on to request support in establishing
10 production centres in the north which are controlled
11 and operated by northern people. Such centres would
12 in his view create an

13 "atmosphere where video and film production
14 is controlled by Inuit (and which) will be
15 most conducive to the full flowering of our
16 creative abilities, an environment (in which)
17 we may develop production techniques and methods
18 of presentation that could introduce a new level
19 of art and understanding to Canadian television."
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Mr. Curley's remarks apply equally well to the Mackenzie Valley Dene communities and it seems to me that the approach he advocates is the only sensible one possible in view of the fact that television is clearly here to stay. Unless this powerfully influential instrument of southern technology is constrained in such a way as to reflect and dissimulate Inuit and Dene languages and values, it will continue to be enormously disruptive in its influence on northern cultures.

Let me now turn to the second general point I wish to establish and that is that the forces which are now contributing to the decline of native languages will surely grow in intensity in the event that massive industrial development and its strong counter measures must be instituted to ensure the viability of those languages. I can see no crucial difference as regards to these matters between the Alaskan experience described by Professor Krauss and the inevitable results of pipeline construction in the Mackenzie Valley. In fact, the results are likely to be even more severe if only because the N. W. T. and Yukon do not yet have language rights legislation on the books to parallel the Alaska Bilingual Education Act of 1972. I will return to this topic of legislation shortly below.

Moreover, the Mackenzie Valley Pipeline route would traverse certain areas where, unlike the delta region, the native languages are still spoken by children and if accorded the right kind

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1 of treatment and respect, have a chance to persist as
2 living, evolving languages.

3 I further agree with Professor
4 Krauss' particular prescriptions for the development of
5 the Inuit and Athabaskan languages of the Mackenzie
6 Corridor and would add that in some respects, for
7 example orthography, we are already past the initial
8 stages of development and have begun on a small scale
9 to tackle some of the specific tasks he has outlined.
10 Here are the efforts of a number of organizations and
11 individuals in the realm of practical native language
12 work should be mentioned: The Inuit Cultural Institute,
13 COPE, the Tree of Peace, as well as Bible translators
14 and linguists Phil Howard and Victor Monus, have all
15 done a great deal in this area.

16 As I pointed out earlier
17 however, much more coordination of efforts is required.
18 Also, from what has been indicated concerning the
19 differences in conditions and viability among the
20 languages of the valley, the specific kinds of programs
21 undertaken would necessarily vary in content and
22 emphasis from region to region. This means that a
23 language program designed for a settlement like Ft.
24 Franklin, in which all children are fluent in Slavey,
25 would differ in many respects from a language program
26 in Ft. McPherson where the children would be encouraged
27 to activate the latent knowledge they possess of
28 Loucheux. Given some coherent and principled framework
29 for addressing these individual language needs, however,
30 these particular details could easily be worked out.

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1 Again, it is my contention
2 that at present that kind of framework does not exist
3 but must be established if the languages are to survive.

4 Professor Krauss has also
5 briefly mentioned the training of native people in the
6 realm of native language arts. I have had some
7 experience in this area and would like to point out
8 that in every settlement I have visited and worked
9 in, I have met individuals who have a natural gift
10 for what we might loosely term the verbal arts. Some
11 of these people have received formal education in
12 varying degrees and are literate in English, while
13 perhaps just as many others are not. Some are gifted
14 story tellers. Some have fine abilities as translators,
15 while still others have a natural feel for their
16 language and the intricacies, nuances, and subtle
17 shades of meaning and phraseology which characterize
18 its inner essence. These variously gifted resource
19 people, educated or not, constitute a unique base
20 of talent within the communities and could easily be
21 trained to work together on projects designed to ensure
22 the continuation of their languages. So, that the
23 talent and personnel is out there.

24 Let me turn finally to my
25 third point concerning the necessity of establishing
26 native language rights by law. My contention is basically
27 this: if the Mackenzie Valley Pipeline proposal is
28 approved and construction begins while the educational
29 and media institutions continue to operate as they
30 presently do, then the inevitable result will be a

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1 continued fatal weakening of the native languages of the
2 Corridor.

3 This would be tragic for the
4 people who now speak those languages and for Canadian
5 society in general. It seems to me that the way to
6 avoid this catastrophic result is to institute
7 legislation which will make it absolutely impossible
8 in principle for this to come about. Professor Krauss
9 has already suggested certain provisions such
10 legislation might embody and these strike me as
11 realistic and appropriate to the situation in the
12 Mackenzie Valley.

13 There is, moreover, ample
14 precedent for this kind of legislation. In Alaska,
15 the Bilingual Education Act of 1972 provided that
16 state-operated schools attended by at least fifteen
17 pupils, is now set eight, whose primary language is
18 other than English, should have at least one teacher
19 fluent in the native language of the area and that
20 written and other educational materials should be
21 developed in that language. A general fund was
22 established to implement the bilingual education
23 programs.

24 A related bill passed at the
25 same time established the Alaska Native Language Center
26 at the University of Alaska in Fairbanks whose functions
27 were:

- 28 a) to study languages native to Alaska.
29 b) to develop literacy material.
30 c) , to assist in the translation of important documents.

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1 d) to provide for the development and dissemination
2 of Alaska native literature.

3 e) to train Alaska native language speakers to work
4 as teachers and aids in bilingual classrooms.

5 Although Professor Krauss
6 himself the first director of the Language Center,
7 had suggested that this particular legislation came
8 far too late to counter the effects of language erosion
9 in certain areas induced by large scale industrial
10 development, it seems to me that the aims of legislation
11 are sound and its specific provisions represent a
12 step in the right direction, no matter how related the
13 legislation is. If legislation of this kind were
14 implemented in the Canadian North, it would clearly
15 do much to protect the basic human rights of the Dene
16 and Inuit residents.

17 Within a specifically Canadian
18 context, I would like to mention the case of the
19 Official Languages Act of 1969 as a further example
20 of language rights legislation. Not only did this Act
21 provide for the recognition of French as a national
22 language on a par with English, equally importantly
23 it established a framework within which the learning
24 of French by non-speakers has been actively promoted
25 and encouraged. In particular, a great deal of money
26 has been spent by the Federal Government to train
27 civil servants, students and others to speak French.

28 To the extent that this
29 particular approach to the protection of language rights
30 in Canada has been successful, I can see no reason why

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Cross-Exam by Veale

1 it could not be applied to the northern native
2 languages. Given the fact that the Dene and Inuit
3 languages are the languages of a majority of residents
4 of the N. W. T., then it would seem to me that a strong
5 case could be made for recognizing them as official
6 languages of the territory.

7 Note that just as in the
8 case of promoting French to an official status, this
9 proposal would not necessarily force every non-native
10 northerner to learn Inuktitut or one of the Dene
11 languages, but it would certainly create a climate
12 in which that kind of learning would be encouraged
13 and would, more importantly, accord the native languages
14 the status they deserve. With that, I'll end my
15 testimony.

16 MR. GOUDGE: Thank you very
17 much, Mr. Ritter. These gentlemen are available for
18 cross-examination. Mr. Sigler isn't here but Mr.
19 Reesor from the municipality has indicated that they
20 have no questions. Mr. Veale for the Council of
21 Yukon Indians would be next.

22 CROSS-EXAMINATION BY MR. VEALE:

23 Q Dr. Krauss, you've
24 indicated that the Language Rights Act in the State
25 of Alaska preceded pipeline approval by approximately
26 six months. Could you tell me what impact the
27 Alyeska Pipeline project had generally speaking and
28 maybe you could indicate the difference, the quantitative
29 difference the impact would have had, had there not
30 been a Language Rights Act in Alaska?

Krauss, Ritter
Cross-Exam by Veale

THE COMMISSIONER: Has the Act done any good? Maybe that's what you're driving at.

WITNESS KRAUSS: If I drew a map--the pipeline on that map, you would see that it goes through areas following roadways that have already been layed as far as the Alaska range, for instance. So, through the southern half, it penetrates an area that has already been devastated by penetration of roads, along which there was not anyone under the age of twenty who could speak the native language.

North of Fairbanks, there are some communities, some removed from the actual pipeline route which have been profoundly affected by the pipeline route, which have been profoundly affected by the change in employment patterns of the young men who have gone off, or the men of any age who have gone off to work on the pipeline. But it is too soon to say that the bilingual programs in those specific communities, I'm thinking mainly of the North Slope communities of Anaktuvuk Pass and Barrow, and also as reflects on another Canadian language here too. The language that's on our side we call Kutchin and on your side you call Loucheux is also spoken in Arctic Village and Venetie which have been reflected again by the change in employment patterns and it's too soon to say to what extent the bilingual programs here will come in time to prevent the erosion that would be from the displacement of the young people working on the pipeline.

Cross-Exam by Veale

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Krauss, Ritter
Cross-Exam by Veale

1 MR. VEALE:

2 Q Do I take it that you're
3 saying there has been adverse impact on language
4 survival in Alaska as a result --

5 WITNESS KRAUSS: It's too early,
6 in all honesty, in part, it is too early to say and
7 in part the Bilingual Education Acts came 20 or 30
8 years too late to save anything.

9 THE COMMISSIONER: Well you
10 say, that impact had already occurred, along the route
11 of the Alaska Pipeline south of the Yukon River with
12 the building of the highway network in Alaska in the
13 past generation. Those people to use the language
14 that they've become accustomed to have already been
15 impacted.

16 WITNESS KRAUSS:

17 A Yes, that situation is
18 different from -- a part or maybe most of the Canadian
19 proposed route. On the northern half where the areas
20 have not been impacted, before, it is too early to say
21 and it's a nip and/tuck battle, and basically it's a cliff
22 hanger as I perceive it, all the way. The minute you
23 get something that looks like the schools are going
24 to stop destroying the language then you've got
25 penetration of television, who knows what next, so
26 it's something that has to be a continuing struggle.

27 Q When you speak of
28 language groupings or areas where road networks and
29 railway networks have already impacted, are these the
30 areas you're talking about when you say, five to

Krauss, Ritter
Cross-Exam by Veale

1 fifteen years for general community literacy in a
2 native language?

3 A I'm talking about
4 general community literacy for those who speak a
5 language would in any community probably take some-
6 where between five and fifteen years. In the communi-
7 ties where the children no longer speak the language,
8 you have to inculcate or bring back or bring out the
9 language before you could teach people to read it and
10 write it, but with the same kind of skill as someone
11 who already speaks the language. So this is a more
12 complex situation where we're not talking about
13 languages -- communities where the children still
14 speak native but particularly in reference to those
15 communities where the children still speak the
16 language that would refer to this five to fifteen
17 year period of development of general illiteracy
18 but this would be true of any community although
19 the ability to speak the language may stop at the
20 age of say 20 years.

21 Q Well Mr. Ritter made
22 mention of what he calls, I forget the term, but
23 where someone does not speak it, but they are --

24 WITNESS RITTER Passively
25 competent in the language.

26 Well, they
27 could understand it when spoken to them in varying
28 degrees but no longer actively speaking.

29 Q Dr. Krauss, what's your
30 comment then on communities where there is the passive

Krauss, Ritter
Cross-Exam by Veale

1 competence.

2 WITNESS KRAUSS:

3 A You would expect the
4 same to be reflected in the ability to read the
5 language but then presumably, reading and writing
6 would work relatively well in those communities too,
7 yes, because it's been our experience in fact, that
8 in an academic situation the kid's doing something
9 they want to do. They'll maybe less reticent with
10 their pencil than they would with their tongue.

11 Q So passive competence
12 is in an area in between total loss and you know,
13 speaking the language?

14 A WITNESS RITTER: Very much
15 so.

16 Q By the
17 way Professor Ritter, this ^{Loucheux} / dictionary that
18 I take it you compiled is an example of what you're
19 talking about in the sense of converting the spoken
20 language to written system but can be used to develop
21 a literacy base in each of these villages.

22 A Right. That represents
23 one of the first tasks you have to undertake. So
24 basically, we started with phoenetic rendering of
25 Loucheux language and then we translated that into
26 English, a system of orthography based on English
27 letters using a few additional symbols and diacritics
28 to represent those sounds that are in Loucheux that
29 we don't have in English.

30 Q Yes. But

Krauss, Ritter
Cross-Exam by Veale

1 you found that you could use the Arabic symbols that
2 we use in the English language?

3 A Yes, that's -- as Pro-
4 fessor Krauss pointed out, probably the least of our
5 problems that -- as far as devising an alphabet that
6 people can use probably require, given the right kinds
7 of people,,the least amount of time to complete.

8 Q Now you
9 have undertaken this work in connection with the
10 Loucheux language and there is of course, an Inuit
11 Language Commission I think that is doing the same
12 thing with the Inuit languages. Is any similar pro-
13 ject underway in connection with any of the other
14 Dene languages that we're concerned with besides
15 Loucheux?

16 A In the N.W.T.?

17 Q Alright,
18 let's take the entire --

19 A Yes, ~~there~~ is some work
20 I know has been conducted in the Fort Simpson area
21 by Mr. Victor Monus and Phil Howard. This is a
22 Slavey speaking area and I've seen a number of the
23 productions that they have turned up, basic primers
24 and readers and things of that sort.

25 Q And they have done it
26 by using these -- sofaras the written language is
27 concerned, they've produced a written system that
28 uses the same Arabic symbols as we use?

29 A Yes for those cases of
30 which the sounds are the same.

Krauss, Ritter
Cross-Exam by Veale

1 Q Yes.

2 A Basically.

3 Q But -- but that applies
4 in the case of most sounds doesn't it? That is, you
5 can use these Arabic symbols with respect -- in various
6 combinations to represent sounds, can't you?

7 A That's correct.

8 Q And is the Inuit Lang-
9 uage Commission using Arabic symbols?

10 A I -- I must confess,
11 I don't know exactly what has come out of the latest
12 series of meetings have had -- concerning unified
13 orthography. Perhaps we could direct that question
14 to Mr. Okpik he might know. I think he does.

15 Q Well,
16 one other thing that I was going to ask. Oh yes,
17 both of you say, and I hope I understand both of you,
18 you say that, well you go so far Dr. Krauss, as to
19 say that to ensure the survival of these languages
20 it should be a term of condition of any right-of-way
21 granted to a pipeline -- in respect to the pipeline
22 that it not be commenced until the native languages
23 have been adapted in written form to include the
24 technological terms that are encompassed in pipeline
25 construction. You both agree that unless similar
26 measures, many of them falling short of that proposal
27 are taken, the culture will die with the language.
28 Sorry, it's getting late here, but let me just make
29 sure I understand both of you, because I may not see
30 either of you again for some time to come. By culture

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1 you mean the -- the -- to start with the collective
2 memory, the past their people share, that is in a
3 sense the foundation stone I suppose of culture. The
4 beliefs about nature, about the origin of themselves
5 and about the relations among themselves. Now that
6 without trying to be profound is -- if that were
7 extinguished, that would mean the end of the culture.
8 Are we on the same wave length?

9 WITNESS KRAUSS: I have to
10 draw an analogy as something like the very air you breathe.

11 Q Like what?

12 A Something
13 like the very air you breathe. Anytime you express
14 yourself as we are doing right now, we are doing so
15 in our language which identifies us and enables us
16 to exist intellectually and to work together. To live--
17 it's the very tie that binds our society together and
18 to destroy this, is to destroy that tie and this has
19 often been done with a particular purpose in mind.
20 There are many people who have wanted to destroy that
21 tie, and with that, then they -- it goes beyond things
22 that we actually say in the language, it is the
23 actual act of being a Dene or Inuit.

24 Q Yes.

25 And you're saying that one of the -- to reduce this
26 to the language of the Order in Council establishing
27 this Inquiry, that one of the social impacts of the
28 building of the pipeline and the establishment of the
29 energy corridor, unless appropriate safeguards were
30 adopted and you go so far Dr. Krauss as to say

1 that you would postpone the pipeline until the.
2 language had been converted to a written system and
3 technological terms had become a part of it, but,
4 unless those measures were taken, the language and
5 the culture of the peoples along the route of the
6 pipeline would die? Have I got you?

Krauss, Ritter
Cross-Exam by Veale

1 A. One step farther than
2 that, that is to say that not only should the copy
3 of the blueprints exist with the Dogrib text, for
4 example, the section that goes through Dogrib
5 country, but that the use of this should be expected
6 and naturally implemented by the very intellectual
7 nature of the community as developed by the time the
8 pipeline goes through. In other words, it's not that
9 it exists pro forma in a book on a shelf, but it
10 would actually be the natural thing to use while
11 going through that part of the Mackenzie Valley.
12 That's different still.

13 THE COMMISSIONER:
 It's pretty stiff.

14 Right, I interrupted you, I guess, Mr. Veale.

15 MR. VEALE: Q Mr. Ritter,
16 there's a map to the right of the map that talks about
17 language in Alaska, and that has on it Loucheux and
18 Inuktitut and Dene language groups, and Hareskin.
19 Could you tell us for the record and perhaps after-
20 wards draw on that map the language groupings in
21 the southern Yukon which would be affected by the
22 Fairbanks corridor or the Fort Yukon corridor?

23 WITNESS RITTER: That could
24 be done, yes.

25 Q Well, could you indicate
26 for the record what language groupings are involved
27 in that?

28 A Drawing it?

29 Q No, you could just
30 indicate to the microphone rather than drawing it.

Krauss, Ritter
Cross-Exam by Veale

1 THE COMMISSIONER: Well, why
2 don't you do it on the map? It makes it a lot
3 easier. If you're going to do that, do the Fairbanks
4 corridor and let's leave the Yukon corridor just for
5 the moment because the only alternate route that has
6 been put forward in serious vein is the Fairbanks
7 corridor. That's the Alcan proposal.

8 A So you'd like to see
9 a listing of the languages from Fairbanks down to
10 Whitehorse, is that it?

11 Q Yes. Well, he wants
12 that and the Yukon, Fort Yukon route. I just want
13 this Alcan route through the Yukon, which follows
14 the route of the Alcan Highway through the Yukon.

15 A I think part of this
16 is already outlined by the map which is compiled
17 by Dr. Krauss, which fortunately includes a portion
18 of the Northwest Territories and the Yukon. Basically
19 there is one language group which is spoken almost
20 entirely within the confines of the Yukon Territory.
21 That is a language called Tutchone which there
22 are two main divisions, north and south. Northern
23 Tutchone would include such settlements as Mayo,
24 Pelly Crossing, Carmacks. Southern Tutchone would
25 include Burwash, Haines Junction, Champagne-Aishihik
26 Whitehorse and Lake LeBarge; but these are again
27 showing really two different varieties or dialects
28 of the same language.

29 Q Yes, before you leave,
30 it has been proposed that if the Alcan route were

Krauss, Ritter
Cross-Exam by Veale

1 chosen to deliver Prudhoe Bay gas to the southern
2 48, or lower 48, that if the delta gas, Beaufort
3 Sea gas were to be taken out via that mainline,
4 there would be a supply leg from the delta along the
5 Dempster down to Whitehorse. So what languages
6 would that affect?

7 A Well, first the
8 effect Gwich'in -- or Loucheux, the one we are now
9 familiar with, that would be affected, I think, very
10 crucially because it would pass right by Fort McPherson.
11 It would then traverse the Tutchone area
12 and then pass down to Whitehorse. So basically we
13 have Loucheux and Tutchone most directly affected,
14 or at least speak the languages in this area,
15 through this area the connecting one would pass.

16 Q Right. Can you list the
17 villages where those languages are spoken along that
18 Dempster Highway?

19 A I don't know the exact
20 area of the Dempster link except that it would run
21 from some place near McPherson to Whitehorse and
22 I'm not sure of which communities. There are very
23 few there. Possibly Stewart Crossing, Pelly
24 Crossing, and Carmacks. Those are the three that I
25 can think of that might come close to it.

THE COMMISSIONER:

Right, I follow you.

26 MR. VEALE: Q I take it
27 that you've had actual field experience in Old Crow.

28 A Yes sir, I have.

29 Q How do you account for

Krauss, Ritter
Cross-Exam by Veale

1 the decline in language in a community such as Old
2 Crow, which has not been affected by transportation
3 routes to the same extent as the southern Tutchone
4 region.

5 Q That isn't reached by
6 television either.

7 A No, correct. Well, the
8 answer is a very simple one and relates to points that
9 my colleague and I have both made today, namely it's
10 the educational system. I don't know exactly when the
11 school was first built in Old Crow, but I do know that
12 the decline in the language first came about when the
13 young children were sent to -- first to Fort McPherson
14 I believe, and then to Whitehorse for education
15 beyond Grade perhaps 8, I'm not quite sure of these
16 figures, but the point is that these students left the
17 village, they went to hostels where they were steeped
18 in English and made the transfer from speaking ~~Gwich'in~~ to
19 speaking English. When they in turn went back to
20 the communities, this was the language that they would
21 speak to their brothers and sisters and playmates and
22 classmates. So and this would be followed, once the
23 process was started you had a continual taking out of
24 the children from the village context and plunked down
25 in an area where they had to speak English. So this is
26 in fact what is the old cycle, and that's been within
27 the last, I would imagine since the late '50s or
28 early '60s.

29 Q:
The present school system,
30 at present as I understand it, children are there from

1 Grades 1 to 8, and then they leave the community for
2 higher education elsewhere. Does your view necessitate
3 complete -- a complete education, in other words
4 public school and High School in Old Crow in order to
5 retain the language successfully?

6 A That would certainly
7 help. I don't know that it would be absolutely necessary.
8 My gut feeling is that people in Old Crow would
9 welcome the possibility, not only because it would
10 give them a chance to continue to teach their language,
11 which they do very well, by the way in Old Crow,
12 but for other reasons as well.

13 Q In other words, my
14 question put another way is, if you did have language
15 training to the extent that you would desire in Old
16 Crow, would all that be undone by the fact that the
17 children would leave after Grade 8 and pursue their
18 education outside?

19 A It would, of course, to
20 some extent. It would break the continuity. But if
21 they had received the proper kind of training through
22 even eight years or nine years, then that would not
23 -- it would be like arithmetic perhaps, or any other
24 subject they might take. Perhaps they wouldn't have
25 a chance to follow up on it in Whitehorse, but there
26 would be a firm basis there.

27 Q Is it possible for you
28 the
29 to draw any distinctions between/coastal route and the
30 interior route with respect to the impact that either
 one would have on language retention in Old Crow, for

Krauss, Ritter
C ross-Exam by Veale

1 example?

2 A Well, the coastal
3 route would obviously avoid some of the problems
4 associated with having the camps located very, very
5 close to Old Crow itself. This probably takes us back
6 into the issue that my colleague discussed about
7 quarantining. There was no possibility of interchange
8 or exchange of visits between the camps and the
9 community, perhaps not. But I'd just like to say that
10 again in the absence of some kind of overall language
11 rights legislation, that the net effect of either route
12 would come pretty much, it would be pretty much the
13 same, namely a continued erosion in the language.
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Krauss, Ritter
Cross-Exam by Veale.

1 Q Have you had any
2 experience with any of the southern Tutchone communities
3 with respect to their ability or to the extent, or
4 to what extent have they retained their language?
5 In other words, maybe a comparison with Old Crow
6 would highlight it.

7 A I've made a couple of
8 Visits to Burwash, which is on the Alaska Highway
9 route.

10 Q That's close to the
11 Alaska border?

12 A That's close to the
13 Alaska border, and I passed through Haines Junction
14 and Champaign. In general the language is far weaker
15 there than it would be in Old Crow or as far as I can
16 tell any of the languages of the Mackenzie Valley.
17 That is my subjective feeling at this point, and of
18 course there the devastating influence was the con-
19 struction of the Alcan Highway, and it was that
20 particular development that set in motion the various
21 processes that have led to again the erosion of the
22 language.

23 So in general the
24 southern Tutchone was much weaker condition than
25 Loucheux in Old Crow is, or Loucheux in Fort McPherson.

26 Q Well, this question is
27 to either Dr. Krauss or Mr. Ritter. Comparing the
28 two situations of Old Crow and say Burwash Landing,
29 what effect does that have on the time required to
30 bring the language up to a point of general community

Krauss, Ritter
Cross-Exam by Veale

1 literacy. Is there any way -- I take it, Dr. Krauss,
2 you may not be familiar with these areas and it
3 may be difficult to comment on.

4 WITNESS KRAUSS: Somewhat.

5 Q But are you able to
6 comment on that? We're talking now about the timing
7 required to implement the program that you have
8 recommended in your evidence.

9 A We were talking about
10 the literacy. I don't see any vast difference in the
11 time frame involved in an area where the language is
12 still very strong as in Fort Rae, or somewhat eroded
13 as in Old Crow, or as severely eroded as in Burwash
14 Landing, to teach those who speak the language to
15 people to be able to read and write the language inso-
16 far as they are capable of understanding and speaking
17 the language would take approximately the same amount
18 of time in any one of those cases.

19 Would you agree with that?

20 WITNESS RITTER: Yes.

21 Q So we're not dealing
22 with substantially different time frames then, you know,
23 in comparison -- in making a comparison between Old
24 Crow and Burwash Landing.

25 A I would like to perhaps
26 add a little to that comparison, and that is that
27 Professor Catherine MacLellan did her field work in
28 the Burwash area or southern Tutchone area in, I think,
29 '47, '48, '49, somewhere in that time period, and at
30 that stage of the game I think everyone was speaking

Krauss, Ritter
Cross-Exam by Veale

1 the language in that area except possibly the youngest
2 generation of children. So that in Burwash today anybody
3 who is over 30 has a pretty good command of his
4 language, and that situation also holds in Old Crow
5 where the difference lies is probably in the extent
6 to which the young people in Burwash are more
attuned to English rather than the native language.
7 That is the case in Old Crow.

8 THE COMMISSIONER: Professor
9 Ritter, how would you account for the difference
10 between say Fort Rae and Old Crow? Fort Rae is on the
11 highway, such as it is. It has been for five years,
12 and it is close to the capital. It's 100 miles, 90
13 miles from the capital, and not as isolated in trans-
14 portation routes as Old Crow. Television reception in
15 Rae, radio reception is uninterrupted in Rae. In Old
16 Crow you don't get television, and radio reception
17 isn't very good, and yet when this Inquiry went to
18 Fort Rae, we were there for three days. I think everyone
19 who spoke, men and women and children spoke, I think
20 every single one of them spoke in Dogrib. They may have
21 translated for themselves in English, but chose to speak
22 and no doubt they wanted me to understand their mother
23 tongue, and there is no more effective way of making
24 a point, I may say. That's interesting, though, isn't
25 it, that Old Crow would have suffered this deterioration
26 in their command and use of the language. Yet Fort
27 Rae, just 90 miles away from here, from this citadel
28 of English-speaking culture, should have preserved it.
29 Is there any reason that you can think of for that?

Krauss, Ritter
Cross-Exam by Veale

1 A Well, this is interesting
2 because we discussed this particular mystery today, the
3 three of us, and I'm not sure I have anything enlighten-
4 ing to say on the topic. I noticed that myself and am
5 not really sure why it could have come about. I have
6 a few guesses. I wonder, for example, about where
7 the children in Fort Rae have received their education.
8 Has it always been exclusively in Fort Rae, or do
9 they come out to --

10 Q Well, apart from
11 Providence and Resolution, I think that's what somebody
12 was saying, they go to a school, that is a modern
13 school at a place called Edzo ten or 12 miles away.
14 I think everybody goes there, even kindergarten chil-
15 dren. It's obviously a creation -- the whole idea of
16 putting it there was an idea that the department had,
17 I suppose. I think it preceded the establishment of
18 the Territorial Government.

19 Well, anywaY, it's something
20 that we'll all have to just reflect upon, I guess.

21 WITNESS KRAUSS: I have some
22 ideas to address to that. It may have to do in part
23 with the basic size of the linguistic community. How
24 many different communities they have, the stability
25 of the language in those communities, and how heavy
26 a sense, actually, of self-awareness or of basic
27 attitude that we were talking about. These people
28 in Rae apparently just feel that this is our language
29 and we're going to keep on speaking it because we're
30 the way we are. Whether that means because we're

Krauss, Ritter
Cross-Exam by Veale

1 ordinary or because we don't want to be like other
2 people, or because we just like the way we are and
3 don't want to change. It has a great deal to do
4 with the national psychology of a group of people
5 which can vary considerably from group to group,
6 depending on many factors, including probably
7 size.

8 It has been our experience
9 in Alaska that the smallest, the numerically smallest
10 languages are amongst the first to wilt away under
11 the pressure.

12 WITNESS RITTER: And I
13 believe you pointed out today as well that Fort Rae
14 is the largest single Athabascan speaking community
15 in Canada.

16 WITNESS KRAUSS: I'm sure it's
17 by far the largest Athabascan speaking community in
18 the entire north. That includes Alaska and Canada.

19 Q Well, Professor Ritter,
20 you talked about the native language programming on
21 the radio, and some of it received by Old Crow. Is
22 there any native language programming in the Yukon
23 per se on radio stations in the Yukon?

24 A This is almost scandalous.
25 In all C.B.C. broadcasting in the Yukon Territory, not
26 to my knowledge one single minute of native language
27 broadcasting, period, nothing, in the Yukon.

28 Q Professor Ritter, you've
29 also mentioned the French language program in Canada.
30 Are you aware of monies spent in the Territorial

Krauss, Ritter
Cross-Exam by Veale

1 Government on French language training as opposed
2 to native language training?

3 A I don't have accurate
4 figures here. I can give you some estimates, however.
5 The Yukon Territorial Government, I think, will be
6 receiving in a five-year time period ending in '78
7 something on the order of \$400,000 for French language
8 instruction in the Yukon Territory. This is for
9 French language instruction. This does not include
10 monies spent on teachers' salaries, for teachers who
11 in the normal course of their work teach French in
12 Grades 5 through 7. So I believe the figure is some-
13 thing like about \$400,000 and the Y.T.G. will adminis-
14 ter for French language programs in that period.

Krauss, Ritter
Cross-Exam by Veale

1 Q And are you aware
2 of native language training finances?

3 A The same time frame
4 I would estimate about fifty to sixty thousand
5 dollars.

6 Q You also mentioned
7 the native organizations in the Northwest Territories
8 that are involved in language retention in that
9 general area. Are there any organizations in the
10 Yukon involved in the same general area?

11 A Yes, there is an
12 organization called the Yukon Indian Cultural
13 Education Society which is based in Whitehorse. It
14 does quite a bit of work in trying to foster language
15 programs in some of the settlements in arts and
16 crafts and things of that sort.

17 Q You mentioned towards
18 the end of your evidence the situation with respect
19 to French and English in Canada and I'm probably--
20 certain conclusions that can be drawn from that as
21 a result of the debate that is going on in the
22 country today. Are you familiar with Mr. Spicer's
23 recommendations with respect to changing that
24 program?

25 A That was in his latest
26 annual report. He suggested among other things that
27 the large sums of money which have been spent to
28 train civil servants who already embarked on careers
29 to speak French through emersion courses or what have
30 you. This may be used in the school programs especially

Krauss, Ritter
Cross-Exam by Veale

1 at the elementary level to teach young children to
2 speak -- to acquire French.

3 Q I take it you have --
4 that is in line with your recommendations to this
5 Inquiry?

6 A Very much so.

7 THE COMMISSIONER: There
8 are judges involved in this program too, and
9 encouraged to do so, and do so, if I may say so.
10 They get results that I leave to others to
11 characterize.

12 A I believe Mr. Spicer
13 did, in his report.

14 MR. VEALE: We won't ask
15 for a demonstration. Dr. Krauss, has Alyeska or
16 Alaskan Arctic Gas, have either of those companies
17 made any financial contributions to a language
18 program.

19 WITNESS KRAUSS: I believe
20 I can say none to my knowledge but none. I do believe
21 that they have not. They are occasional photographs
22 in the newspaper of the official handing to the
23 president of the university a cheque for \$2,500
24 scholarship but it doesn't specify that this is her
25 native languages or anything like that.

26 MR. VEALE: I see. I have
27 no further questions.

28 MR. GOUDGE: Mr. Bayly, of
29 the Committee for Original People's Entitlement?
30

Krauss, Ritter
Cross-Exam by Bayly

1 CROSS-EXAMINATION BY MR. BAYLY:

2 Q It's you Dr. Krauss
3 that has to catch the 7:10 airplane, isn't it?

4 WITNESS KRAUSS: There is
5 I believe a 10:00 p.m. one too so --

6 Q Well, I don't have
7 very many questions.

8 THE COMMISSIONER: Well,
9 let's try for the 7:00 one then.

10 MR. BAYLY: Q One of
11 the things that you say would facilitate the
12 retention of native languages is the development of
13 an effective orthography and are you aware that in
14 the Northwest Territories several of the languages
15 used either a syllabic or a Roman orthology and that
16 various Eskimo dialects and the Eskimo language
17 uses a combination of these depending on which
18 area is involved?

19 A Yes, I am aware and
20 I could give you some details on it if you wish. Some
21 of this literacy has been well entrenched and is
22 relatively old. The syllabary literacy in particular
23 started in Eskimo languages in the 1870's and was
24 also extended at that same time to the Athabaskan
25 languages. The amount of literacy actually practiced
26 in some of the communities -- I haven't visited, I
27 can only guess -- but that there is a good traditional
28 start made in that number one and also in more recent
29 times better or more convenient orthographies in
30 writing systems have been developed so that

Krauss, Ritter
Cross-Exam by Bayly

1 I could go through a listing of the languages likely
2 to be affected by the various routes and tell you
3 whether or not the viable orthography exists or not.

4 Q Well, without doing
5 that just yet and you may want to do that following
6 up the next couple of questions, it isn't really
7 accurate to describe the languages as belonging to
8 the oral tradition where there is some orthography
9 whether or not it's an appropriate one, there may
10 still be because of the priests bringing in the Bible
11 or whatever and translating it into the language and
12 writing it out in syllabics or Roman orthography, some
13 written tradition started. What I'm concerned with
14 is how do you use that? I'm assuming that the
15 people who know that in the native villages or towns
16 are probably the older people rather than the younger
17 people, would you agree with me there?

18 A In the case of the
19 older orthographies, it is normally the older people
20 although I understand in the Inuit communities that
21 the younger people -- there has been a tradition of
22 the older people to teach the young people and have
23 kept this on for generations already. But to answer
24 your question of how this -- how literacy would be
25 used -- with literacy you can convert what is taught
26 into the school into something that is -- with literacy
27 in the native language, you can convert what is taught
28 in the school or you can convert the school experience
29 into something that is supported rather than
30 destructive of the native language and culture.

Krauss, Ritter
Cross-Exam by Bayly

Q Now, we have had witnesses here who have told us some of the problems with trying to introduce language and the teaching of native culture into the schools in the Northwest Territories. One of these was a man called Robinson and he said that the problem appeared to be that lip service was paid to cultural inclusion but that it was very difficult to get teachers who were qualified in southern Canada or outside the area to adapt themselves and their courses to the include the cultural inclusion as they call it in the Northwest Territories. This would involve, I take it, control of who the teachers are of this by the local communities or recognizing that people who may not be qualified in our tradition may be the best teachers, would you agree with me there?

A Absolutely. This is a major consideration that no longer can those who have normally been considered best qualified teach in the schools. These people actually qualify as well as a person who can speak the language. This can be done in two ways. Either you take an outsider and you make a good speaker or Dogrib out of him or you take somebody who speaks Dogrib already quite well and train him to teach.

Q The second of which seems to be the more logical in terms of doing it more quickly.

A Well, statistically, I think that you would probably find that the second

Krauss, Ritter
Cross-Exam by Bayly

1 is the more viable alternative, yes.

2 Q Yes, so when native
3 groups are asking that they have control over
4 education or aspects of it so that they can control
5 the input of their culture and language into
6 education, you would support it on the grounds
7 that that may help rather than hinder the retention
8 of native languages?

9 A Those two things go
10 hand in hand. They're not totally synonymous but
11 statistically they turn out to be that way.

12 It does basically
13 put bilingual education -- native language education
14 basically puts control of the educational systems
15 in control of the native people that speak that one
16 language.

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Krauss, Ritter
Cross-Exam by Bayly

1 Q That seems to be a
2 practical solution to a problem. What I'm concerned
3 with turning to a slightly different aspect is whether
4 in a short term project like a pipeline, it really
5 makes sense to use a great deal of energy in writing
6 say a construction manual in Inuktitut or Dogrib or
7 Chipewyan, for example, Is that a sensible way to go
8 about preserving a language?

9 A If a put a pocket television
10 set in the corner of your living room, and say since
11 we don't have programs in English ready yet, we'll just
12 program everything in Chinese and that's all there is
13 available, this is bound to have an eroding effect on--
14 well, I've picked a poor example perhaps because
15 there's a difference between the relationship of
16 English and Chinese. Of course, that's the relation-
17 ship between English and Dogrib. But if you park a
18 television set in the corner of somebody's house that
19 speaks English only, with the excuse that it's impractical
20 or expensive to produce programs in native, this is
21 tantamount to saying that sorry, it's just too
22 impractical to allow you to continue.

23 Q I realize that it may
24 be feasible to spend the time, the money, the energy
25 to take the route of making sure that instruction
26 manuals in everything are available in the native
27 language, but where would you--if you had to start
28 someplace, where would you start?

29 A I'd start in the schools
30 by training a generation of people who would simply

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Cross-Exam by Bayly

1 expect and naturally talk about welding or X-raying
2 or whatever in the native language, and not expect to
3 have to talk about it in English because the boss,
4 this is on the classical argument, will speak English.
5 But the boss will be a Dogrib in this particular part
6 of the--this particular segment of the pipeline.

7 Q Now, if the communities
8 had control over this aspect of their education, would
9 you agree that they should be the ones that decide
10 where to start or what use the native language is to
11 be put to in the schools? Who should make that
12 decision?

13 A The native people should
14 certainly be the ones to make the decision but they
15 are also entitled to the appropriate information
16 necessary to have full understanding--appropriate
17 information necessary to make a well-considered judgment
18 in that matter.

19 Q Now, my understanding
20 is that one of the problems that the Language Commission
21 of the Inuit Tapirisat, one of the problems that
22 it's dealing with is whether to invent new words using
23 the basic structure of the language or to try and
24 resurrect what terms may have been available when the
25 language was used exclusively or whether to adopt from
26 English or other languages terms which could be used.
27 This is a problem that the native people seem to be
28 having on their own. Is this something that they
29 should be left to solve on their own or is there a way
30 in which teachers, government structures, linguistic

Krauss, Ritter
Cross-Exam by Bayly

1 experts like yourself can give them some assistance?

2 A The problem of adapting
3 that language to twentieth century requirements is a
4 beautiful challenge which people have the freedom to
5 steer their own cultural destiny, can really meet
6 easily. Not easily. I mean a challenge is difficult,
7 but they should be given the privilege at least of
8 meeting that challenge and whether they decide to
9 borrow from English or whether they decide to create
10 terms out of their own stock of roots, it doesn't
11 basically matter for the survival of the language
12 anyway that it's done.

13 In English, we still think
14 we're speaking English when three-quarters of the words
15 we're using actually come from French or Greek or
16 something. But that isn't the major issue. The major
17 issue is to have the privilege or the right to develop
18 their own language and their own culture. It's not
19 something that we have to perceive of as static. It's
20 unfair to perceive of it as such and you should give
21 it as much right and accord it the same expectations
22 as we expect of our own, namely the ability to evolve.

23 Q Yes. So, it isn't
24 simply an indication of unhappiness with one's own
25 language that you use say the term savoir faire
26 as an English term rather than--

27 THE COMMISSIONER: Could you
28 repeat that?

29 MR. BAYLY: That was for you,
30 Mr., Commissioner. And the fact that native people may

Krauss, Ritter
Cross-Exam by Bayly

1 use numbers in English in say broadcasts on the radio
2 when they're speaking in their own language and use
3 numbers that are in English. It doesn't necessarily
4 mean that debasing it. It may be a question of
5 convenience.

6 A It's basically a question
7 of attitude and we feel quite confident in the future
8 of our English language and we're not the least bit
9 reluctant then to borrow even let's say the word
10 Sputnik which indicates the Russians beat us to the
11 punch in that particular issue. We feel we've got
12 enough else going for us that we can afford to borrow,
13 to acknowledge that they were ahead in that point.
14 It's okay.

15 Q Right. So, in that way
16 languages can evolve in conjunction with each other
17 and sort of take rubbings off one another without
18 suffering, provided the people are free to do this on
19 their own.

20 A In a mutually rewarding
21 relationship, yes.

22 Q And that involves some
23 sort of control over things that are going on in one's
24 own community--

25 A Definitely.

26 Q --to be able to do that.
27 And I gather that's why you say that a single teacher
28 can have a great deal of influence, not necessarily
29 because he gets into everybody's house and starts
30 speaking English and disrupts their lives that way but

Krauss, Ritter
Cross-Exam by Bayly

1 because he may be revered in a way that--or emulated
2 in a way that is not something that we would think of
3 as natural in our own community.

4 A It depends. If you look
5 particularly at the history of Athabaskan communities
6 in Alaska, most of them are communities of people who
7 up to the establishment of the school, were somewhat
8 nomadic within a limited area and the existence of the
9 school represents, in a sense, the--excuse me. The
10 existence of the village as a sedentary village
11 represents a type of definite commitment to the notion
12 of cultural change; to camp around a school where you
13 can babysit your kids while they go to school and
14 change the culture.

15 If the school turns out to
16 be something which tells you quit speaking native,
17 while it has your kids there under its thumb, this is
18 going to take place within even just one generation.
19 I know of households in villages in Alaska where the
20 grandchild cannot understand his own grandmother and
21 the grandmother can't understand her own grandchild.

22 Q On the subject of
23 television which you say is a disruptive thing for
24 language and I think probably most people would
25 agree with you, that it has a great influence and is
26 on in people's houses in a central spot and probably
27 causes more English to be learned than perhaps normally
28 occurs. Would you say that in small communities where
29 television is not presently available, that there
30 should be a local option as to whether or not it is

Krauss, Ritter
Cross-Exam by Bayly

1 introduced?

2 A Yes, very definitely.

3 Q And you advocate, I
4 understand; you and Mr. Ritter would advocate that
5 there should not only be local option but in some
6 fashion, some local control over the content of
7 television if it is introduced so that certain things
8 can be excluded and other things can be included in the
9 programming.

10 A Yes, but that's awfully
11 idealistic considering that the people in Wrigley
12 unlikely control what N. B. C. or C. B. C. produces
13 in Toronto.

14 THE COMMISSIONER: It's
15 idealistic to the point of virtual impossibility, isn't
16 it?

17 A Is there some way that
18 they could--I know of one case, for instance, not on
19 this continent, but in the case of Iceland where the
20 nation of Iceland had not yet set up or implemented
21 its own television broadcasting system, this is in the
22 late '50's, early '60's, and there was an American
23 air force base within striking distance of the capital,
24 Reykjavik, which had its own T. V. station. There
25 was a market--a black market in the sale of television
26 receivers at Reykjavik which the government made
27 every effort to control until such time as it can come
28 up with its own television station, fully understanding
29 the cultural stakes and this is the kind of thing
30 which would have to be implemented. It's the kind of

Krauss, Ritter
Cross-Exam by Bayly

1 control that would have to be implemented in this area
2 pending, again pending the establishment of local
3 production and local control over broadcasting.
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Krauss, Ritter
Cross-Exam by Bayly

1 Q A more practical
2 solution than trying to exclude some things from
3 coming into television broadcasting, is to, I suggest
4 to you, work towards having a certain amount of
5 content in the various native languages in an area.
6 Do you agree with that?

7 A Yes, ultimately the
8 native languages should be able to stand on their
9 own in competition with other languages and other
10 ways of life. But they should be given a chance to
11 do this without being indiscriminately trampled
12 before ever given it.

13 THE COMMISSIONER: Well, Dr.
14 Krauss, let me just ask you to comment, and Dr.
15 Ritter, let me just ask you to comment on a couple of
16 things. Don't think I haven't followed the papers
17 you've given, but if you stopped every ordinary white
18 person on the street in Yellowknife I should think you
19 would be likely to say to them, "Well, these languages
20 are dying, they cannot exist with the invasion of
21 television. The universal culture of the west will
22 prevail here in the north. " In fact, there's a feeling
23 that that culture is so closely wound up in this --
24 bound up on this continent with the use of the English
25 language that many English-speaking people in Canada
26 feel that seven million people in Quebec speaking
27 French, with the cultural heritage of French to draw
28 upon, are doomed to failure in their attempt to ensure
29 their language survives. That's an attitude that
30 can, be -- that abounds, I have no doubt, and the

Krauss, Ritter
Cross-Exam by Bayly

1 sentence that you used at the very outset of your
2 paper, you said somewhere, you said, "well, these
3 aren't isoteric languages spoken by a relic people,"
4 if that's the right word, "they've survived for
5 thousands of years, they survive today and can, given
6 a fair chance, can be made operative," if that's the
7 right word, "in a whole range of daily activities, but
8 they're not used now."

9 Is there anything else you
10 would say to that average skeptical white Yellowknifer
11 beyond what you've said already? I'm just trying to
12 see if I understand what you're driving at here.
13 I'm making myself clear, am I not?

14 WITNESS RITTER: Yes. There
15 are a number of things you might say to that skeptical
16 white Yellowknifer. I think one approach might be to
17 try to appeal to his sense of being a Canadian, say,
18 rather than some other nationality, and in Canada one
19 is supposed to, as I understand it, believe in the
20 concepts of multi-culturalism as well as bilingualism,
21 and commonly it's suggested that rather than being
22 a nation which holds to a melting pot theory of
23 identity, as one that encourages --

24 Q The mosaic.

25 A -- the mosaic theory,
26 I know you're quite familiar with that. Whether the
27 average skeptical white Yellowknifer would be amenable
28 to argumentation along that line, I don't know,

29 Q I wasn't really directing
30 myself to that. I think that -- is there anything else

Krauss, Ritter
Cross-Exam by Bayly

1 about these languages? You see, some of the things
2 you've said about these languages I am sure come to
3 a surprise to the people in this room, as they do to
4 me. That is you said -- and I never applied my mind
5 to it, but you said somewhere here that you can convert
6 these to written systems. The fact that they've been
7 oral for thousands of years doesn't mean that you cannot
8 within a few months produce one of these. That had
9 never occurred to me. It is that kind of thing that
10 I'm sure comes -- you people, this is your specialty,
11 but we're grappling with all kinds of other things here
12 every day and we didn't know that. Is there anything
13 else about these languages that we should be told
14 before you depart from our lives? I suppose that's
15 what I'm getting at.

16 A Well, certainly one
17 common misconception is these are somehow primitive
18 languages and I think Mike has answered that very
19 aptly by saying that in terms of basic expressive
20 power, all languages are equal. Not simply that,
21 but the languages we're dealing with here in the
22 Mackenzie corridor, especially the Dene languages,
23 are from certain points of view very rich in structure
24 and certainly in terms of phonetics, far more highly
25 evolved even than English in the sense of complexity.
26 They are somewhat difficult languages by our standards.

27 Q All right. Let me just
28 ask you something. You've given me this noun
29 dictionary in Loucheux. Right, this is nouns in Loucheux,
30 and, there are, I don't know, 100 pages of nouns here,

Krauss, Ritter
Cross-Exam by Bayly

1 something like that. Am I right?

2 A Yes.

3 Q All right, somebody told
4 me when I first took on this job in each of these
5 native languages there were only 400 words, something
6 like that. But look, those things are said on the
7 street and 400 words, well, that's the sort of --

8 A It would be a lot
9 easier than French then.

10 Q Pardon me?

11 A If there were only 400
12 words.

13 Q O.K. Well, I've said
14 enough for now. But that's what you're up against.
15 I mean, people don't understand that these languages
16 are as rich and have the capacity for survival,
17 given what you argue they ought to be given, a fair
18 crack at survival. That essentially is your case.

19 WITNESS KRAUSS:

20 If I can make philoso-
21 phical, the question really is not only do these
22 languages have the capacity for survival, but I think
23 basically do we have the capacity for survival? In
24 other words, is this culture, that we represent,
25 capable of controlling itself well enough to desist
26 from destroying everything in its path to the point
27 where it destroys itself? I think that's one of the
28 issues that environmentalists certainly would bring
29 up here, and I don't see any difference in the language
30 situation either. It's a question of not only survival
of the Inuktituk language, but a survival of much more

Krauss, Ritter
Cross-Exam by Bayly
Cross-Exam by Ziskrout

1 than that.

2 THE COMMISSIONER: Yes, I
3 understand that. Well, how are we doing here? I
4 think we should complete the evidence of this panel.

5 MR. GOUDGE: We're almost
6 through, sir.

7 MR. BAYLY: I think those are
8 all the questions I'm going to ask, sir.

9 THE COMMISSIONER: Those are
10 all the questions you had for me to ask?

11 MR. GOUDGE: Mr. Hollingworth
12 for Foothills Pipe Lines?

13 MR. HOLLINGWORTH: I'm in-
14 debted to you, Mr. Commissioner, for asking the
15 questions that I had.

16 MR. GOUDGE: Mr. Ziskrout for
17 Canadian Arctic Gas?

18 MR. ZISKROUT: I have a few
19 more.

20
21 CROSS-EXAMINATION BY MR. ZISKROUT:

22 Q Dr. Krauss, on page 30
23 you've included a quote from a film, and it reads:

24 "Yes, our culture will survive because they
25 are teaching the language in the schools."
26 That's on page 2. Do you agree with that quotation?

27 WITNESS KRAUSS: I'm only
28 quoting it to illustrate the basic attitude of those
29 people. They automatically equated the survival of
30 their language with the -- as the answer to the

Krauss, Ritter
C ross-Exam by Ziskrout

1 question, "Will the Kwakiutls survive?"

2 I stated in this that I
3 do agree with it, but I'm bringing it up from the
4 point of view that it's not just my opinion, but this
5 is a very spontaneous reaction of a group of native
6 people themselves. It's inaccurate, in a sense, what
7 they said was not a direct answer to the question,
8 "Will your culture or will you as Kwakiutls
9 survive?"

10 They said, "Well, our language will."

11 Their answer was to that,
12 "Our language will survive," which to me indicates
13 that they simply equated very instinctively and very
14 passionately the survival of their language with the
15 survival of themselves as Kwakiutls. That's the point
16 of the quotation, of making that quotation.

Krauss, Ritter
Cross-Exam by Ziskrout

Q Do you agree with the quotation, is that what you're saying? The culture will survive because language is being taught in the schools, is that a true statement?

A Not necessarily, no.

Q It's a important reflection of their feelings however?

THE COMMISSIONER: Okay, you think that to show the link between language and culture not to show the importance of it being taught in the schools, so that is important too?

A Yes.

MR. ZISKROUT:

Q And Dr. Krauss, on page 6, you further refer to the fact the language being taught in the schools is very important. When you say however, the fourth line from the bottom, however with that question, that most deadly force to the language was the schools and on page 7, where you say in the bottom of the first paragraph, "the school thus has been the main scene for the cultural atrocity which has taken place in Alaska over the last 70 years and on page -- it's a theme running throughout your paper I take it, that teaching language in the schools is the most important thing, for the preservation of language, is that right?

A No, for one thing, my insistance on this in past history is a limited time frame and we have not had -- throughout all this period, roads, pipelines or televisions.

Krauss, Ritter
Cross-Exam by Ziskrout

1 These are new -- relatively new threats, but the --
2 in the past the main force against the survival of
3 the language has indeed been the schools, not because
4 they taught English but because they taught in English
5 everything and inculcated the attitude that the
6 only language of the future was English and forget
7 native.

8 Q You know, on page 2,
9 or page 1 of your paper, fourth line from the bottom,
10 you say, I do not know a history of a single case
11 where a nation has truly survived its language and I
12 don't believe you went on --

13 A I omitted the also
14 really absurd possibility that a language might
15 survive a nation, which I didn't consider relevant
16 here. Latin is still around in books, but, well that's --
17 it would have wandered off the subject. But is it --
18 are you addressing yourself to the question of you
19 do not know a case where a nation has truly survived
20 its language?

21 Q Well no, nor do I know
22 of a case where a nation has died while it's language
23 remains alive. I take it you save it and when you
24 refer to nation I take it you're referring to a
25 cultural nation?

26 A Yes, not necessarily
27 to a political nation.

28 THE COMMISSIONER: Not to a
29 nations state?

30 A Yes. Political --

Krauss, Ritter
Cross-Exam by Ziskrout

1 Q You do say that a
2 cultural nation can not die while its language re-
3 mains alive? That's correct isn't it?

4 A Yes, I think so.

5 Q Do you know of any
6 cultural nation where the language has been -- a
7 nation in which the language has been taught to the
8 young people where that nation has disappeared?

9 A Only through physical
10 extermination. I know of cases of that sort too,
11 where the very last person in the case of the Yahis
12 and you can read the book -- the very last person
13 of that tribe spoke the language exclusively, but
14 that was only through physical extermination, so as
15 long as there are any people still walking around
16 who speak that language, that nation is alive.

17 Q So I take it if -- I
18 take it that it necessarily follows that if the
19 language is taught in the schools, that cultural
20 nation will survive?

21 A Does not necessarily
22 follow. There are now other -- several other factors
23 more recently coming in, which could also threaten
24 the survival of the language perhaps fatally, even
25 if the schools supported it. In other words other
26 factors which may outway the support that could be
27 given to the language in the school, namely the mass
28 media or uncontrolled inundation by culturally
29 different people or another one, which I did not
30 mention by the way, is disbursal. This is a very

Krauss, Ritter
Cross-Exam by Ziskrout

1 common thing. Taking kids away to boarding schools
2 and hoping they'll never return and being right in
3 many cases.

4 Q I see, but if a language
5 was taught in the school, and the media used the
6 native language, then the cultural nation would
7 survive you would say? Is that correct?

8 A So long as the people
9 are -- let's put it this way. Are not exposed to
10 continual pressure in the home or in the communities
11 of some other language, then I imagine -- I feel that
12 the people and with their language will survive, yes.

13 Q And five or ten years
14 of pipeline construction couldn't be termed this
15 continual pressure and exposure which would terminate
16 a cultural nation. Is that it?

17 A Five years. A really
18 closed ended promise of five years and we'll leave
19 you alone with -- we'll build this pipeline through
20 and you go your own way and then we'll get out and
21 nothing else will come in our -- following us and
22 so on. Would be risky, but probably not fatal. Five
23 year vague we felt foreign presence, but, if
24 there was some way to guarantee that the road would
25 be closed forever, to anyone but the people who spoke
26 Dogrib after the pipeline were completed, then maybe
27 it would remain harmless, but the threat to me, seems
28 so, I don't know the possibility. Once building a
29 road and then closing it off to commercial traffic
30 is unthinkable, I think they've even forgotten their

1 original promises in Alaska where this highway or
2 that was meant to be only a -- you know, a haul road
3 for the particular company or something like that.
4 It's not only a question of time or how or when it's
5 to be open to the public and the original promise
6 that it would never go through the Minto flats with
7 hunters or something, was totally forgotten. I
8 don't imagine anybody will remember that in 20 years
9 time. I mean it will be buried like all the other
10 treaties. If there was some guarantee, that it would
11 be vaguely felt five year presence of some kind or
12 other, it would be tolerable perhaps, but, it's hard
13 to imagine such a guarantee. Quarantine plus guar-
14 antee.

15 Q Well if the native
16 languages were used in the schools and if more native
17 language was evidenced in the media, wouldn't that
18 be sufficient?

19 A As my colleague just
20 gave you the statistics was it thirty minutes out
21 of 112 hours and so it's increased to 31 or even to
22 60 hours. That doesn't guarantee it, no. It has
23 to be a basic change, not just in tolerance, let's
24 put it that way.

25 Q Pardon me?

26 A Not a basic change
27 in degree of toleration, but even more basic change
28 than that in the degree of cultivation of the native
29 language on the part of anybody who wants to live
30 in that particular part of the world.

Krauss, Ritter
Cross-Exam by Ziskrout

1 Q A number of witnesses
2 that have appeared before this Inquiry have stated
3 that if the land claims are not settled before the
4 pipeline goes through, that will bring about cultural
5 genocide.

6 I take it that you say that's
7 not necessarily so. What has to be done is it has to
8 be ensured that the language survives and if the
9 language survives, the people survive?

10 A Well, no, not necessarily.
11 There can be other types of genocide than cultural.
12 There can be economic genocide or something so that
13 it was no longer possible to eat up here and the people
14 would have to leave and throw in the towel too. So,
15 I'm not saying that that's the only thing that's
16 necessary, no, but there has to be an economic base.
17 I'm talking basically about the cultural or spiritual
18 base for survival. There are other factors, I'm sure,
19 which I don't know enough about to feel qualified to
20 speak on.

21 Q People before this Inquiry
22 have said that there can be no cultural survival if
23 land claims are not settled before the pipeline comes
24 through and I take it you don't agree with that?

25 A If there are not land
26 claims, there cannot be cultural survival?

27 Q You say that all that's
28 necessary is that the language be preserved in deciding
29 the Japanese can wear kimonos and make transistors.
30 As long as they speak Japanese, that's sufficient?

Krauss, Ritter
Cross-Exam by Ziskrout

1 A Yes. How are you going
2 to do that without land claims, I'm not so sure without
3 some kind of an economic base for continued survival
4 and some control over the situation up here, however
5 that's to be achieved, but I can't imagine that with
6 no control other than some law that says if anybody
7 around here has to speak Dogrib, that there'd be any
8 way to enforce that or to ensure that the Dogrib people
9 could remain there.

10 Q Well, if the native
11 people got control over the school system, and more
12 native language was used in the media, would that
13 suffice?

14 A Whatever would suffice
15 to retain the Dogrib language or whatever as the
16 basic language of that area would suffice for the
17 survival of the Dogrib people. I can hardly imagine
18 that all Dogrib is gone and everybody here still speaks
19 Dogrib. That's highly unlikely, therefore it would
20 follow. But the conditions necessary for the survival
21 of the Dogrib language are not just enough on the radio
22 and enough in school. It would have to be other
23 conditions in areas that I wouldn't be good at defining
24 for you, such as economics that also has to be fulfilled
25 so that the people could stay there to speak their
26 language, yes.

27 No, I do not think that legal
28 measures for the language alone would ensure the
29 survival of that language.

Q Okay. You would have to

Krauss, Ritter
Cross-Exam by Ziskrout
Re-Examination

1 have the insurance that the language would survive
2 and also the insurance that the people would be able
3 physically to remain on the land?

4 A Yes. I mean you have to
5 have a body to survive in order for the language to
6 survive.

7 Q Yes. Those are all my
8 questions.

9 RE-EXAMINATION BY MR. GOUDGE:

10 Q Dr. Krauss, let me
11 conclude by asking you this; you've advocated strongly
12 the need for the development of literacy in native
13 languages and you've also acknowledged that native
14 cultures have in the North been based on oral
15 traditions. What, in your view, are the long-run
16 implications for culture founded on oral traditions
17 once literacy is developed? Are there any implications?

18 A Yes, there are some.
19 Number one, I don't feel that a culture based hitherto
20 on oral traditions--number one, I know it's capable
21 of adding to itself a literacy tradition. In this part
22 of the world, there's never been any problem like that.
23 There are parts of the United States, for instance,
24 in the American southwest, where people feel that their
25 language is too sacred to commit to writing or too
26 sacred to be used in such a profane place as a school
27 and as long as perhaps such an attitude like that
28 prevails in other cultures, it could be conceivable,
29 but here the people are just as amenable to learning
30 the literacy as let's say the Fins were a hundred years

Krauss, Ritter

Re-Examination

ago, which is right where they were as these people here are now. I see nothing in the culture that is antipathetic to the development of a literary tradition-- written tradition on top of an oral tradition but as we all, some of us do know, there sometimes is some sacrifice to be paid. None of us have been taught to memorize poetry or can recite epics the way Yugoslavs still are able before their culture is committed to writing. Writing does give you--you may lose something but not necessarily. I know of cultures, Iceland is a good one, where the oral tradition remains just as much alive as it ever did before in spite of the fact that the written tradition is extremely strong or has been for a thousand years.

Q Would there be any implication for the attitude that the people have for their elders once you move to a culture based on literacy rather than an oral culture?

A Not only would I say that there is no problem in that, to my experience, but ironically in Alaska and to some extent here too there is a greater tradition amongst the elders in literacy in their own language than amongst the younger people. Some written traditions that were established by the Russian Orthodox Church in Alaska amongst the Aleuts, for instance, produced very widespread literacy amongst the older generation which was to the everlasting shame of the American school system, literally suppressed system of--tradition of literacy was suppressed.

In the American school system

Krauss, Ritter
Re-Examination

1 in the Aleutians in order to eradicate Aleut
2 culture and the Russian Orthodox religion that went
3 with it.

4 But the older people who have
5 retained this still and the older people who can
6 read Loucheux in the tradition of Archdeacon MacDonald
7 who established a writing system in the 1880's or
8 1870's for this language is now basically a respected
9 ability of the older people and it is a base of respect
10 for literacy that goes with the--in fact the venerability
11 in certain sections of this area. Inuit and Loucheux
12 both have this tradition and I'm quite sure also
13 Slavey in the old--at least in the syllabics.

14 Q Has the development of
15 literacy cut down on the importance of elders as the
16 trend's middle vehicle for culture?

17 A I think that--the
18 experience that we've had in Alaska is that the elders
19 are always happy to see a revival of literacy in their
20 own culture, even if the spelling system may be changed.

21 Q Thank you. Those are
22 all the questions I have, sir. That concludes the
23 evidence of this panel.

24 MR. COMMISSIONER: Well thank
25 you very much, Dr. Krauss and Prof. Ritter. We appreciate
26 your coming, of course, from Alaska to share your views
27 with us, Dr. Krauss and it's been a most worthwhile
28 afternoon and I'm pleased naturally to see you again,
29 Professor Ritter and thank you both. I should say that
30 I have been corresponding in the French language with

1 Dr. Louis Hamelin who used to be a member of the
2 Territorial Council here and no doubt with a view to
3 bringing the correspondence to a close, he has replied
4 today and sent along with his letter, a recent paper
5 of his printed in Italian.

6 Well, thank you again both and
7 we'll adjourn. What time should be convene tomorrow?

8 MR. GOUDGE: I'd suggest, sir,
9 9:30.

10 THE COMMISSIONER: Okay, 9:30
11 then. 9:30 A. M.

12 (WITNESSES ASIDE)

13 (NATIVE PEOPLES AND LANGUAGES OF ALASKA - MAP MARKED
14 EXHIBIT 827)

15 (QUALIFICATIONS AND EVIDENCE OF DR. MICHAEL KRAUSS
16 MARKED EXHIBIT 828)

17 (EVIDENCE OF JOHN T. RITTER MARKED EXHIBIT 829)

18 (MAYO INDIAN LANGUAGE - NOUN DICTIONARY MARKED EXHIBIT
19 830)

20 (LOUCHEUX ATHABASKAN NOUN DICTIONARY MARKED EXHIBIT
21 831)

22 (PROCEEDINGS ADJOURNED TO OCTOBER 5, 1976)
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